COLONY AND PROTECTORATE OF KENYA

MEDICAL DEPARTMENT ANNUAL REPORT 1935

INCLUDING THE

MEDICAL RESEARCH LABORATORY ANNUAL REPORT 1935

PRICE 5/-

1936
PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER
NAIROBI, KENYA COLONY
To be purchased from the Government Printer, Nairobi, or
The Crown Agents for the Colonies, Millbank, London, S.W.

COLONY & PROTECTORATE OF KENYA

SUDAN

ABYSSINIA

UGANDA

ITALIAN SOMALILAND

TANGANYIKA TERRITORY

INDIAN OCEAN

EXTENSION FROM UGANDA

The position of this boundary must not be regarded as official

REFERENCE

Native Reserves

Forest

Alienated Land

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MEDICAL DEPARTMENT HEAD OFFICES,
NAIROBI.

SIR,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary Conditions of the Colony and Protectorate of Kenya for the year 1935, together with the Returns, etc., appended thereto.

I have the honour to be,

Sir,

Your obedient servant,

A. R. PATERSON,
Director of Medical Services.

The Honourable The Colonial Secretary,
Nairobi.

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ANNUAL REPORT OF THE MEDICAL RESEARCH LABORATORY FOR 1935

MEDICAL DEPARTMENT ANNUAL REPORT 1935

I.—ADMINISTRATION.

During the year 1935 no changes were made either in the system of Departmental Administration brought into operation in 1933, nor in the system of public health administration of the Colony which affected the principles on which these systems are based, as the only administrative change affecting a matter of principle was carried out in furtherance of the general policy of the development of local government institutions in certain areas which was adopted in 1928. The change to which I refer was the transfer of the responsibility for the administration of the child welfare services in Nairobi from Government to the Municipal Council towards the middle of the year. Under the new arrangements the staff engaged on child welfare work in Nairobi is now employed by the Council and all charges are met by that authority which will, however, be reimbursed by Government to the extent of 50 per cent of all authorized expenditure on the service. This change is an important one as the Council will now have a much greater interest in the development of the child welfare service than it could ever have had so long as it was not responsible for its administration and there is already evidence that development may be expected.

Departmental Administration.

With regard to the many services for the provision of which the Medical Department of Government is itself directly responsible, the position in 1935 was even more difficult than in the preceding year, and, from the point of view not only of the medical and nursing staff, but of the administrator and the public, far from satisfactory.

Essentially the difficulties were financial, and resulted from the facts that while it has been impossible for some years now to make increased provision for expenditure on medical services there has each year been an increased demand for medical relief on the part of the African public, an increased demand for instruction in hygiene from the same source, and an increased demand for assistance in almost every field of public health work on the part of the administrator.

And as the first of the demands is made actually on the hospital or dispensary doorstep it cannot be refused. As a result almost all hospitals were overcrowded throughout the year and some grievously overcrowded. Furthermore, as I indicated in last year's Report, the class of case which demands admission is changing, and to-day our wards are full of heavy medical and surgical cases which entail considerable expenditure for their treatment and in an overcrowded hospital place a great strain on the nursing staff. An increased number of heavy cases and an improved standard of diagnosis and treatment mean also an increased demand on the Medical Research Laboratory and again an increased expenditure on equipment and material.

A point has in fact now been reached when but little more indoor medical relief can be provided with the present staff and buildings, and no more relief, either indoor or outdoor, without a substantial increase of financial provision. That this is so became very clear in 1935 for whereas in the case of every preceding year it had been possible, largely as a result of unavoidable savings on personal emoluments, to close the accounts for the year with a substantial saving on the sanctioned expenditure, the saving on the normal working of the year 1935 was only £1,366 and even this saving was wiped out by the granting of a special warrant for £5,000 towards the end of the year for the forward purchase of medical stores for the service of the following year which had become necessary in order to maintain a safe reserve.

The course of events during the past six years is set out in the following table :—

Year	Sanctioned Estimates	Actual Expenditure	Qualified Medical Staff	European		Asiatic and African		Out-dispensary attendances
				In-patients	Out-patients	In-patients	Out-patients	
	£	£						
1930	250,834	236,934	72	2,956	2,272	35,691	220,973	—
1931	252,061	221,202	66	2,626	1,777	35,551	252,610	534,709
1932	219,357	197,260	54	2,375	1,595	31,382	261,795	646,033
1933	215,116	199,568	55	2,182	1,327	36,443	300,277	774,302
1934	201,286	197,967	52	2,271	1,264	42,938	331,979	851,370
1935	199,817	203,451	50	1,831	3,228	43,422	353,346	989,796

An important result of the great and pressing demand for medical relief which I have outlined above is that it is becoming increasingly difficult for district medical officers to devote as large a portion of their time to health propaganda among the rural population, or to the general problems of housing and sanitation in their districts, as in the past. This is the more unfortunate as the opportunities for carrying out such work are increasing in a remarkable fashion and there is now a will to progress which is widespread among the people.

Of this will much material evidence has been provided during the year by many of the Local Native Councils of the Colony who, in addition to passing resolutions with regard to medical matters and sanitary custom, have been only too anxious to vote funds for the erection of hospital wards, maternity blocks, and dispensaries, or for the provision of extra drugs, or the employment of sanitation and welfare staff for the execution of health campaigns.

The very grave problems to which I have referred in this section have been the subject of serious consideration in the Department throughout the year, and from time to time by Government. Every avenue which might lead to economy has been explored time and again, and wherever possible economy has been effected. The problems are, however, of much greater magnitude than any that might be met by measures of Departmental economy even if further economy were now possible. The problems remain therefor at the end of the year a grave source of anxiety both to the Department and to Government.

Staff Changes during the Year.

The following reductions in staff took place during the year :—

District Surgeon	1
Sanitary Inspector	1
Wardmaster	1
Lady Medical Officer	1
Asian Clerks	2
Asian Compounders	3

The following are the principal appointments, promotions and changes made during the year :—

Dr. R. P. Cormack, Senior Bacteriologist, to be Senior Medical Officer with effect from 29-11-35.

Miss K. E. Schaltz, Housekeeper, European Hospital, Nairobi.

Resignations.

Medical Officer	1
Nursing Sisters	3
Clerk—European	1
Wardmaster	1

Retirements.

Senior Medical Officer	1
Assistant Surgeon	1
Nursing Sister	1

Invalidings.

Medical Officer	1

Appointments Terminated.

District Surgeon	1
Asian Compounders	3
Asian Clerks	2

Transfers.

Medical Officer (to Uganda)	1
Nursing Sister (to Nigeria)	1
Sanitary Inspector (to Uganda)	1

Legislation.

No Ordinances primarily affecting the public health were enacted during the year.

Financial.

The total of the sanctioned estimates for the Medical Department for the year 1935 was £200,567, a decrease of £1,309 on the previous year, and the actual expenditure during the year amounted to £204,701, viz., £4,134 above the sanctioned estimates.

The comparative table of the sanctioned estimates and expenditure of the Medical Department for the past three years is as follows :—

Year	Sanctioned Estimates	Sanctioned Extraordinary Estimates	Total Sanctioned	Actual Recurrent Expenditure	Actual Extraordinary Expenditure
	£	£	£	£	£
1933 ..	215,116	50	215,166	199,568	50
1934 ..	201,286	590	201,876	197,967	648
1935 ..	199,817	750	200,567	203,451	1,250

The revenue collected amounted to £22,732 against £18,520 in 1934.

Of the total estimated expenditure in 1935 of £3,237,529 for the Colony and Protectorate, £200,567 represented expenditure on Public Health and Medical Relief, a ratio of 1 to 16.14 or 6.19 per cent.

Detailed returns of the revenue and expenditure are given in Table II at the end of the Report.

II.—PUBLIC HEALTH.

(I) GENERAL DISEASES.

In the absence of any general system for the notification or registration of births and deaths, and of the causes of death, and of any system whereby changes in the incidence of invalidity might be accurately estimated for the Colony as a whole, it is impossible to state with certainty either the extent to which the standard of the public health in Kenya may have risen, or fallen, during the year 1935, or even whether a rise, or a fall, may have characterized the year. In these circumstances I can do no more than record the conclusions at which I arrive as a result of the perusal of the opinions expressed and the facts recited in the forty-seven annual district or institutional reports which have been submitted by Medical Officers from all parts of the Colony, and as a result of consideration of the data which have been collected during the year with regard to the incidence of the most important notifiable infectious diseases.

In the great majority of the district reports submitted the opinion is expressed that, as a result of better rains and better crops, the people have been better nourished in 1935 than for some years past, while it would appear that from a number of districts exports have increased, that better prices have been obtained, and that in consequence of an increase in employment more money has been available.

Furthermore there was no notable epidemic of malaria in 1935 save in Nairobi and Masailand, no epidemic of smallpox, no serious incidence of plague save in the Central Province, and no unusual incidence of pneumonia.

There is, therefore, some reason for believing that the health of very large numbers of people was better in 1935 than in the preceding year, and it may not be improbable that the incidence of minor sickness, of which we have no record, may have been less.

Important, however, as nutrition undoubtedly is in regard to health, it would be unwise to conclude that because food supplies have been somewhat better during any particular year among a people, who at the best are never but somewhat poorly fed, the standard of the public health must of necessity have been notably raised. The normal standard of health among the indigenous peoples of Kenya is, as a result of many factors besides a poor dietary, too low to be greatly affected in so short a space of time as a year by a minor improvement in food supplies alone, though, if the improvement were to be of a major nature, and maintained over a period of years, the results might be very great.

Even so, however, we would still be left with many problems, and other aspects of the picture must therefore be examined if we are to arrive at a reasonably true conception of the state or progress of the public health during any particular year. In this connection the following facts are of importance.

Excellent crops and an increase in prosperity were perhaps more notable in the South Nyeri District of the Central Province than in any other native reserve during 1935, but if the general standard of health in that area was better on that account the improvement was to no small extent offset by the occurrence of some 400 cases of plague in that district alone, as against none in the previous year.

Grazing was better in Masailand in 1935 than for some years past, and there was undoubtedly an improvement in the nutrition of the cattle as a result, and in Masailand such improvement always affects the people, but this was probably offset, to some degree at least, by a severe outbreak of malaria. Elsewhere in the endemic and hyperendemic areas of the Colony malaria remained endemic, or hyperendemic as of old. Throughout the country as a whole pneumonia remained, as it has always been, the "captain of the men of death", and we have no reason to believe that either the incidence or the severity of this disease was notably less than in the preceding year.

Cases of cerebro-spinal fever occurred sporadically throughout the year in more areas than in 1934, while in some areas there were outbreaks of considerable magnitude.

Again such surveys of samples of the population as were made during the year showed no smaller incidence of intestinal worms, of skin and eye diseases, or of malaria than had been revealed by other surveys in similar areas elsewhere in former years. The incidence of these conditions appears therefore to be unchanged.

On the other hand, changes may have taken place which were prejudicial to the public health, while there are several diseases of importance with regard to which, and their effects on the public health, we have but little knowledge.

These changes and these diseases may be doing more harm than we know, and they may well have done more harm in 1935 than in 1934.

Among changes which are undoubtedly taking place and may possibly be harmful are the great changes in dietary to which almost all Africans are subjected when they leave their reserves to work, either on a European estate, or in a town. In the latter case the change is, in many instances at least, almost certainly for the worse, and in the former case, though the change is often perhaps for the good, it is doubtful if it is always so.

Another change which may be of outstanding importance with regard to health is that every year more Africans are being subjected to an increased mental strain, in schools, in offices, in industry, and as a result of the many changes which make it increasingly necessary for almost every adult African to obtain each year either as wage earner, producer, or trader a return for his labours in cash.

In respect of cash the old independence of the African is surely going, partly as a result of what, for brevity, may be termed administrative necessity, partly as a result of ambitions which have been aroused; and where these ambitions have been fulfilled the fulfilment has often been accompanied by new anxieties and by new ambitions. The desire to send the children to school is becoming almost universal in many areas, and the children, still in most cases far from well nourished, are being pressed to succeed; and there are political anxieties, and anxieties born of religious change.

One can imagine few greater changes than these, nor many that might be more likely to have a greater influence on health, either for good or for ill, but so far we know nothing of their general effects though we have during the year obtained some information which suggests that the effects on occasion may be very serious.

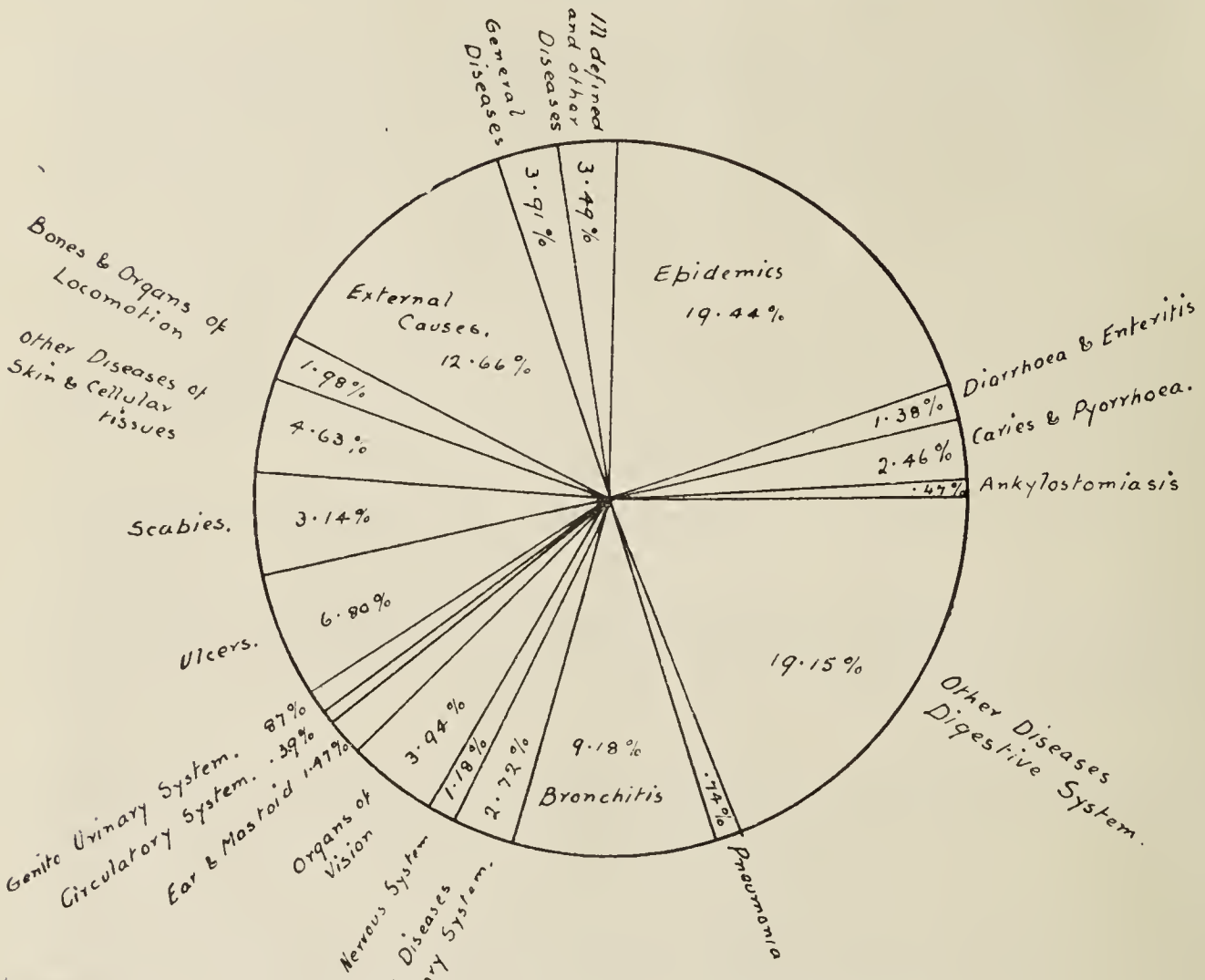
This information to which I shall now refer in greater detail is certainly among the most important which has been collected during the year, since it has reference to the mental health of the people.

It is generally recognized that among European peoples there has been during the past century a steady increase in the incidence of mental disorder, and this increase is generally accepted as being, to a great extent at least, attributable to the continually increasing strains imposed by the various complexities of modern life. There is not yet, so far as I am aware, any evidence that any notable increase in the incidence of mental disorder has taken place among native populations in Africa as a result of the impact of western civilization and the resultant strains to which I have referred, for we still know too little of what the incidence may have been under primitive conditions of life in Africa, or of what it may actually be among more sophisticated African communities to-day.

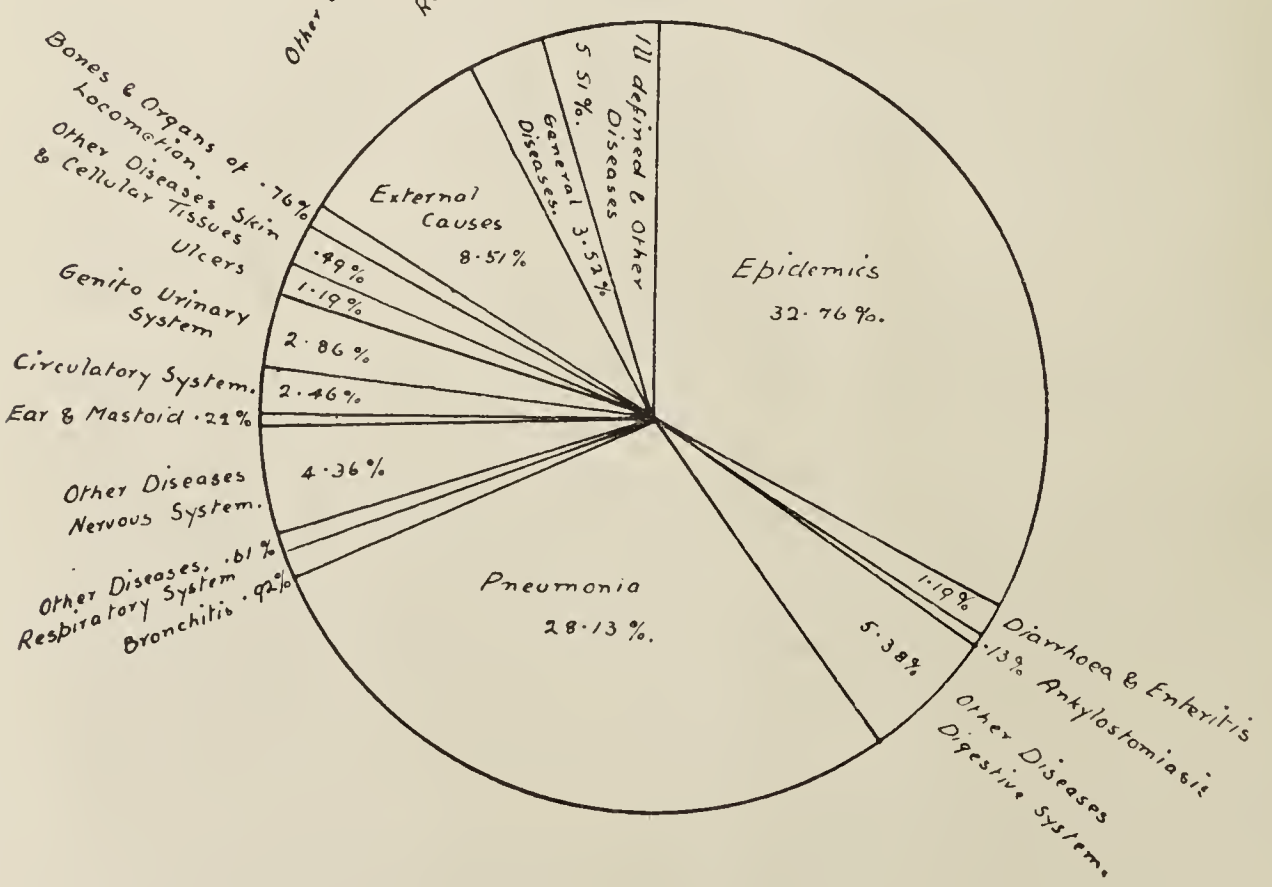
We have, however, some evidence that the incidence of certain types of mental disorder may be increasing among Africans, or that new types are occurring, and some evidence also that this increase, or this new incidence, may be the result of some of the strains to which I have referred, and particularly of strains imposed by scholastic education, and perhaps also as the result of strains imposed by religious changes and the abrogation of old sanctions.

Proportion or Epidemic, Endemic, Infectious, Systemic and other Diseases shown as Percentages of Total Cases Treated at Hospitals and Dispensaries,

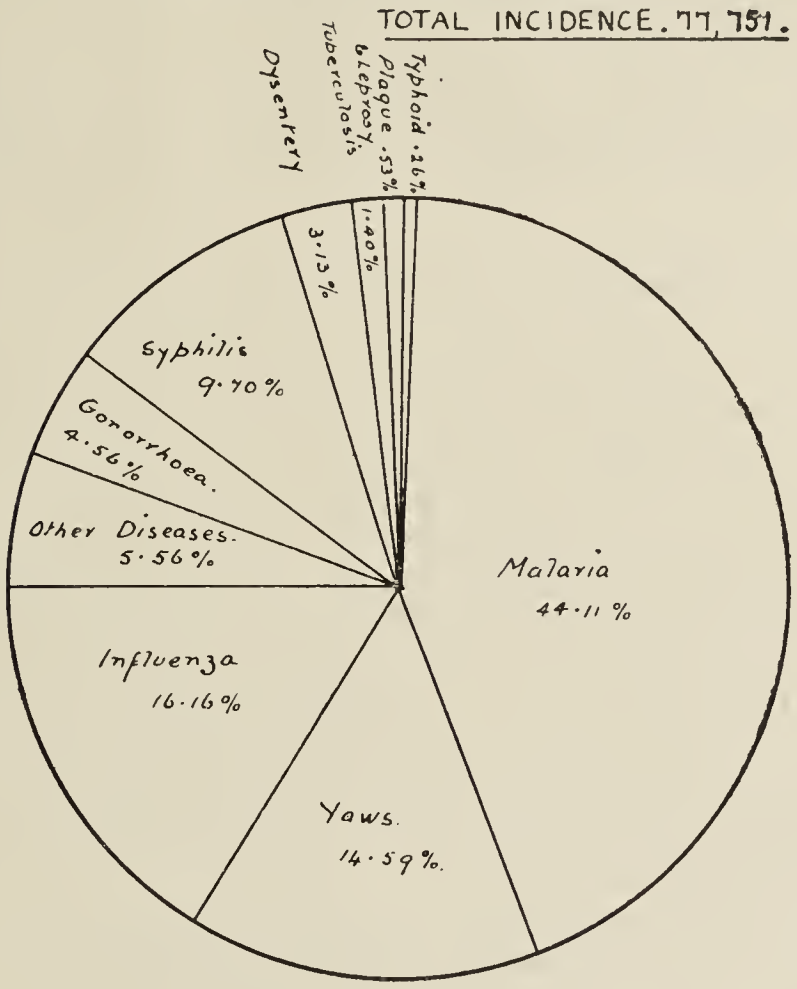
TOTAL INCIDENCE. 399,957.

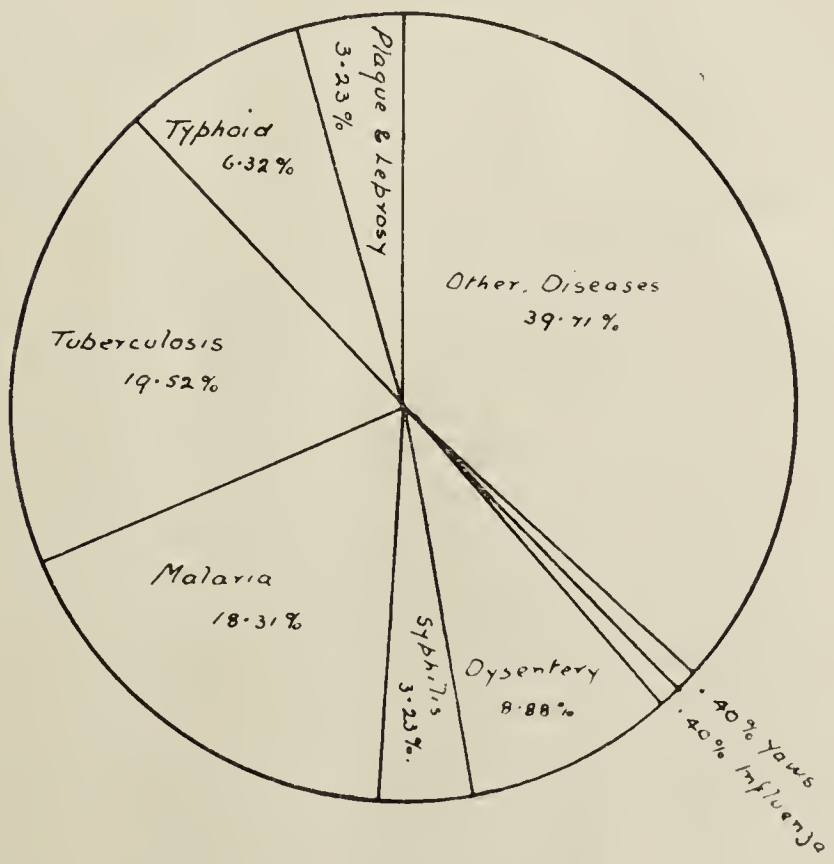


TOTAL DEATHS. 2268.



Proportion in Percentages of Epidemic, Endemic and Infectious Diseases, In-patients and Out-patients, treated at Hospitals and Dispensaries,





The results of an analysis of 120 consecutive new admissions to the Mathari Mental Hospital in Nairobi which was made during the year are given below, and are compared with an analysis of admissions to mental hospitals in Europe*.

COMPARISON OF INCIDENCES AMONG NEW ADMISSIONS TO THE MENTAL HOSPITAL IN NAIROBI AND ADMISSIONS TO MENTAL HOSPITALS IN EUROPE

Psychoses	European	Kenya
	Per cent	*Per cent*
Neurospirochaetal (Neurosyphilitic)	10 to 15	21·6
Senile	12·0	5·0
Epileptic	2·7	5·0
Alcoholic	5·0	3·3
Drugs other than Alcohol	1·5	3·3
Physical Disease	2·8	6·6
Affective	16·0	1·6
Paranoid	2·8	0·8
Adolescent (*Schizophrenia*) (dementia præcox)	20 to 25	19·2

The only point in this table to which I will at the moment refer is the similarity between the incidence of the "adolescent" psychoses (dementia praecox) among Africans in Kenya and Europeans in Europe. The term "adolescent" has been used for this group in Kenya because so far it has been seen here only in young men. That there should be this high incidence of this type of mental disorder among African admissions to a mental hospital is an important matter, and, I think, a new fact, but what may be its most important significance only becomes clear when the analysis is carried further as is done in the following table.

RATIO OF EDUCATED TO NOT EDUCATED IN THE CASES WHERE RELIABLE INFORMATION WAS OBTAINED

	Educated	Not Educated
	Per cent	*Per cent*
31 Organic Psychoses	41·9	58·1
16 Confusional Psychoses	37·5	62·5
19 Adolescent Psychoses	100·0	—
10 Mental Deficiency	50·0	50·0
2 Minor Disorders	100·0	—
9 Undiagnosed	—	100·0
1 Malinger	100·0	—
9 No Disorder	22·2	77·8

In commenting on this table, I would observe that though the series is small it must be remembered that at the Mathari Mental Hospital we get only the worst breakdowns, and not all of them, and none of the very mild cases. The figures, therefor, may well be significant. In these circumstances it would be rash to ignore the question of mental health, or to assume that because the incidence of the more common physical diseases had been lower than usual in 1935 the standard of the public health had been higher. The changes in African life to which I have referred—changes in thought and custom and behaviour and upbringing, changes in religion and in superstition, changes incidental to urbanization, changes from polygamy to monogamy, the change from existence on a subsistence basis where barter was the only method of exchange to a state of affairs where cash is a necessity of life—are too great, and are taking place and being intensified too rapidly, for it to be justifiable to suggest, in the absence of any evidence to the contrary, that in so short a period as a year the changes in the mental health of the people must be negligible.

*Tables extracted from a Paper entitled "An Inquiry into the Correlation of Civilization and Mental Disorder in the Kenya Native," by H. L. Gordon, East Africa Medical Journal, Vol. XII, No. 11, 1936.

I trust that it will not be assumed from the facts I have recounted either that there is no need for many of the changes to which I have referred, or that change must necessarily be harmful, or scholastic education unnecessary. From the public health point of view alone very great changes are undoubtedly essential, and not the least of these changes a change from illiteracy to literacy. But in the case of so delicate an organism as a backward people, as in the case of all delicate organisms, changes must be made with care, and they should not be made without a clear idea of what we wish to achieve, and an intimate knowledge of the nature of the material with which we are working; information with regard to the last point is, however, still largely lacking, and until it is available the health of the people is more likely to suffer than not, no matter how well intentioned our policies may be.

I would now refer to another point which arises out of the table of incidences of psychoses among new admissions to the Mathari Mental Hospital which I have given, namely, to the comparatively high incidence of psychoses with a neurospirochaetal basis. These psychoses may be the result of a previous infection with either the causative organism of syphilis or that of yaws. For the moment we do not know which. These psychoses may on the one hand be for the most part the aftermath of the long drawn out epidemic of yaws which we have some reason to believe is now coming possibly somewhat rapidly, to a close, or on the other hand they may be the first results of the increase in the incidence of syphilis which for some years past, as in 1935, has been recorded as at least a probability in many annual district reports. That such an increase has occurred, and is still occurring is, I think, beyond doubt, and there is some reason to believe that it has not been without effect on the live birthrate of some sections of the people. This latter effect might or might not be a matter of importance, but it is undoubtedly a matter of great importance if an increased incidence of syphilis is leading to an increased incidence of serious mental disorder, and as on this point we have again no knowledge, though we may well suspect that it is so, we have again but little reason to say that the health of the people in 1935 has been better than in the preceding year. And if we turn to the consideration of another venereal disease, namely, gonorrhoea, we will find ourselves again left with an unanswered question.

In 1931 a somewhat detailed medical survey was carried out with regard to the health of one of our pastoral tribes, namely, the Masai. From this survey it appeared that from many points of view the most important disease from which this tribe was at that time suffering was gonorrhoea, and that as a result of a high incidence of this disease a large portion of the women were sterile, and the tribe perhaps in danger of ultimate extinction. What may have happened in the interval between 1931 and 1935, or in the year now under review, we do not know since owing to the financial depression which has prevailed it has been impossible either to take any preventive action or to repeat the survey.

One of several things may have happened during the past five years, the incidence of sterility may have increased, or it may have decreased, or it may have begun to decrease during the year now under review, but we do not know, and so as regards the fashion in which the health of some 40,000 of our population of 3,000,000 may have altered in the past year we have no information of any kind whatsoever. The grazing has we know been better than usual, and the incidence of malaria has been greater, but whether the balance has been tipped to one side or the other by an increase or a decrease in the incidence of sterility or of any other of the many serious complications of gonorrhoea we have no knowledge whatsoever.

In the preceding paragraphs I have tried to give some indication of the various changes which may have taken place with regard to the health of the native peoples of Kenya during the past year. I have pointed out that it is possible that as a result of better crops the standard of health may have been better than in the preceding years, and I have also indicated that owing to some other changes, the results of which are less easy to estimate, the balance

may be falling on the wrong side. In reviewing the evidence as I have presented it, I cannot but feel that the picture which I have drawn is far from bright. Nevertheless, I do not think that the shadows have been exaggerated, and most certainly they are there. It is, however, only a picture of affairs in 1935, and in another year or later it may be replaced by another and a brighter picture. Only a few years ago our general hospitals were feared by Africans, and our mental hospital was feared by any European, whether lay or medical, whose business it was even to visit it. Education, a few years ago, was purely literary and had but little relation to the needs of the ordinary villager, while the sufferer from venereal disease in these days disappeared from our ken as soon as one, or at the most two, injections of some arsenical preparation had relieved him of his most distressing symptoms. To-day, on the other hand, our general hospitals are full to overflowing, our mental hospital a cheerful place to which on occasion the mentally disordered are brought by their relatives on their own account, and to which the relatives of the mentally disordered come frequently to inquire as to the patient's progress. To-day education has a far greater relation to the needs of the villager and has more regard to the defects of his or her culture in respect of personal hygiene, of child welfare, of the maintenance of the fertility of the soil, and the real uses of cattle. The victim of syphilis attends now not only for one or two injections, but frequently for a course of from ten to twelve lasting over a period of as much as three months, while, on occasion, an ex-patient will return some months later with a view to having his blood examined in order to know whether there is now any reason why he should not marry! These happenings betoken progress such as, but a few years ago, would have seemed not only improbable but impossible, and they are changes in the interest of the public health. Whether they may achieve an order of magnitude which will outweigh the adverse effects of other changes is another matter, but that they may not easily do so and are probably not yet doing so, is not a question which can be ignored in endeavouring to estimate the state of the health of the people to-day, and its course during the past year.

(II) COMMUNICABLE DISEASES.

MOSQUITO OR INSECT BORNE.

Malaria.

In 1935, 34,362 cases of malaria were treated in hospitals and dispensaries (other than out-dispensaries) as against 35,215 cases in 1934.

The cases were classified as follows :—

Tertian	621
Quartan	722
Aestivo-autumnal	10,115
Undifferentiated	2,222
Clinical	20,314
Cachexia	312
Cerebral	16

The decrease is insignificant. There was on the other hand an important increase in one town, namely Nairobi, where 3,500 cases were notified as against 2,102 in the preceding year, and an usually high incidence in parts of Masailand.

Blackwater.

The comparative table of cases treated by the Government Medical Staff for the past seven years is as follows :—

	Cases	*Deaths*
1929	28 ...	11
1930	50 ...	8
1931	41 ...	10
1932	52 ...	2
1933	28 ...	9
1934	45 ...	11
1935	37 ...	8

The comparative table of cases notified in the capital town of Nairobi for the past eight years is as follows :—

Year		*Cases*	*Year*		*Cases*
1928	...	4	1932	...	2
1929	...	0	1933	...	4
1930	...	5	1934	...	14
1931	...	2	1935	...	14

Smallpox.

Only fifteen cases occurred. Of these five cases were the aftermath of the severe epidemic of 1934, while ten which occurred in Mombasa were probably occasioned by the introduction of the infection from overseas.

Plague.

One hundred and thirty-nine cases were verified, the incidence apart from five sporadic cases being limited to the endemic districts of Keruguya and Fort Hall in the Central Province. In addition to the cases which were verified in these districts, many others were reported, and it is probable that the true incidence for the year was in the neighbourhood of 600 cases.

Trypanosomiasis.

Fifteen cases only were reported.

Typhus.

Seven cases were reported.

INFECTIOUS DISEASES.

Pneumonia.

In 1935, 2,264 cases of pneumonia were treated in Government hospitals with 638 deaths, the number of cases being somewhat less than in 1934, and the death rate 4.5 per cent higher.

Syphilis and Yaws.

The number of cases treated at hospitals and dispensaries, as apart from cases treated at out-dispensaries, for the years 1934 and 1935 were as follows :

		1934		1935
Syphilis	... ...	6,367	...	7,633
Yaws	... ...	12,992	...	11,378

Tuberculosis.

The comparative table of cases treated is as follows :—

Year		*Cases*	*Year*		*Cases*
1929	...	676	1933	...	969
1930	...	756	1934	...	1,145
1931	...	874	1935	...	1,162
1932	...	886			

It would be unwise to draw any conclusion from this table save that more cases have been treated.

Leprosy.

Four hundred and seventy-nine cases received treatment during the year.

Enteric.

Two hundred and twenty-cases were treated as against 205 in the preceding year.

Dysentery.

The classification of cases treated was as follows :—

	1933	1934	1935
Amoebic ...	744	752	1,358
Bacillary ...	218	279	146
Undefined ...	662	759	951

Diphtheria.

Seven cases were treated as against nine in 1934.

Cerebro-Spinal Fever.

Three hundred and sixty-two cases were treated as against sixty-one cases in 1934 and it is probable that many other cases occurred in several of the native reserves. The disease occurred throughout the year and in almost every part of the Colony, and the cases were in most instances very severe. This wide-spread and long contained incidence was the cause of much anxiety throughout the year, but in the event no major epidemic occurred.

Anthrax.

One hundred and fifty-five cases were treated with four deaths.

Undulant Fever.

Only two cases were treated.

HELMINTHIC DISEASES.

The comparative table of cases treated during the past four years is as follows :—

Diseases	1932	1933	1934	1935
Ankylostomiasis	1,229	1,606	1,845	1,897
Ascariasis	6,750	7,515	8,158	7,777
Tæniasis	15,725	19,007	23,712	34,321
Schistosomiasis	252	351	453	571
Total ..	23,956	28,479	34,168	44,566

VITAL STATISTICS.

The non-native population of the Colony was determined by census in March, 1931, when the following figures were obtained.

European	16,812
Indian	39,644
Goan	3,979
Arab	12,166
Others	1,346

The African population is estimated at 3,012,421.

REGISTRATION OF BIRTHS AND DEATHS.

The position in connection with the registration of births and deaths remains unsatisfactory.

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES AMONGST EUROPEAN AND NON-EUROPEAN OFFICIALS IN THE COLONY AND PROTECTORATE OF KENYA

	European			Non-European		
	1933	1934	1935	1933	1934	1935
Total number of officials resident ..	1,756	1,846	1,819	2,457	2,448	2,432
Average number resident	1,340	1,380	1,367	2,103	2,068	2,059
Total number on sick list	946	971	738	1,965	2,114	1,891
Total number of days on sick list ..	5,956	7,054	5,658	9,532	14,847	12,266
Average daily number on sick list..	16·32	19·33	15·50	26·11	40·67	33·60
Percentage of sick to average number resident	1·21	1·40	1·13	1·24	1·96	1·63
Average number of days on sick list to each patient	6·29	7·26	7·67	4·85	7·02	6·49
Average sick time to each resident ..	4·44	5·11	4·14	4·53	7·18	5·96
Total number invalided	5	9	8	7	8	8
Percentage of invaliding to total residents	0·28	0·48	0·44	0·28	0·32	0·33
Total deaths	3	4	2	4	3	2
Percentage of deaths to total residents	0·17	0·21	0·11	0·16	0·12	0·08
Percentage of deaths to average number resident	0·22	0·29	0·15	0·19	0·14	0·10
Number of cases of sickness contracted away from residence ..	—	—	—	—	—	—

III.—HYGIENE AND SANITATION.

A.—General Review of Work Done and Progress Made.

(1) PREVENTIVE MEASURES.

MOSQUITO AND INSECT-BORNE DISEASES.

Malaria.

Early in the year it was reported by the Medical Entomologist that in his view conditions appeared to be more favourable for the propagation of malaria than had been the case for some years past, and on account of this report a comprehensive pamphlet on the prevention of malaria was prepared by the Department, and issued free to the public in very large numbers. In this pamphlet particular stress was laid on the value of spraying rooms towards evening with a home-made pyrethrum spray fluid. This method achieved within a very short time a very remarkable popularity, and it was soon in almost universal use among the European community throughout the country. It is of course impossible to measure any results which may have followed, but the method was so widely used, and in many cases so regularly and intensively used, that it is difficult to imagine that it was not responsible for preventing many cases of malaria.

During the year the necessity for improving the anti-malaria service in Nairobi was brought to the notice of the Municipal Council by the Commissioner for Local Government at the instance of the Medical Department as in our view the provision which existed was very far from being satisfactory.

During the year approval was given by the Colonial Development Fund Advisory Committee for a free grant from that Fund of £18,220 for the prosecution of anti-malarial measures at Kisumu, and for a free grant of £3,000 towards a malaria and mosquito survey and for the institution of certain preventive measures at Mombasa on certain specified conditions. Preliminary arrangements for the expenditure of these sums were made towards the end of the year.

Routine mosquito surveys and preventive measures were carried out in many other townships as usual.

Trypanosomiasis.

Experimental work was continued throughout the year in South and Central Kavirondo from funds provided partly from the Colonial Development Fund, and partly by the Local Native Councils concerned.

Plague.

Apart from ordinary routine sanitary measures directed towards the promotion of general cleanliness and the improvement of the storage of grain and other foodstuffs, and the improvement of housing, no special measures were adopted save in the only two rural districts which were affected where inoculation was carried out on a considerable scale.

Smallpox and Vaccination.

The number of vaccinations performed was 46,406.

Dysentery and the Enteric Fevers.

No special preventive measures were carried out.

Tuberculosis.

No *ad hoc* preventive measures are in operation against tuberculosis.

HELMINTHIC DISEASES.

The institution of pit latrines continues to be a part of the general sanitary programme in all districts were staff is available.

(2) GENERAL MEASURES OF SANITATION.

There is nothing new to record in this direction.

(3) SCHOOL HYGIENE.

There is still no School Medical Service but wherever possible District Medical Officers and Sanitary Inspectors carry out medical and sanitary inspections, respectively, and endeavour to take advantage of the opportunities which the schools afford for advancing propaganda with regard to personal hygiene. The amount of work which is done in this fashion is in itself considerable, but it is small indeed compared with what ought to be done.

(4) LABOUR CONDITIONS.

No notable developments have taken place during the year as few, if any, of the larger employers of labour are yet in a position to undertake new housing schemes. Conditions on the gold fields have been on the whole very satisfactory.

(5) HOUSING AND TOWN PLANNING.

No major urban schemes were adopted during the year. In the native reserves work has proceeded steadily, and in the more advanced reserves there is an increasing desire on the part of very large numbers of Africans to erect better houses. The movement for improved houses is now definitely established in these reserves, and with any notable increase of prosperity would move rapidly ahead.

(6) FOOD IN RELATION TO HEALTH AND DISEASE.

Inspection and Control.

Routine inspection has been carried out as usual where possible.

Markets, Dairies and Slaughter Houses.

A considerable amount of work has been done at many small native markets to secure more sanitary conditions.

Food Supplies.

In the native reserves food supplies in 1935 were generally better than in the previous year.

B.—Measures Taken to Spread the Knowledge of Hygiene and Sanitation.

A large and very comprehensive health exhibit was staged at the show of the Royal Agricultural and Horticultural Society of Kenya, at Nairobi, and several smaller exhibits were staged at shows in the native reserves.

Apart from these shows the teaching of hygiene was carried out in one way or another by every medical unit in the native reserves.

C.—Training of Sanitary Personnel.

The systematic training of Africans to be dispensary health workers was continued as heretofore at the Jeanes School.

D.—Recommendations for Future Work.

It would be an easy matter to fill many pages with recommendations for future work, for the needs of the people for further instruction in hygiene, for better food supplies, for improved housing, for hospitals, for dispensaries and for medical relief in general, are legion. None of these needs, however, can be met without expenditure of some kind. For the moment greatly increased expenditure, either on the part of individuals, local authorities, or Government, is unfortunately out of the question, and so, as all of these needs are already well known and their urgency in most cases recognized, it is unnecessary to recapitulate them here. There is, however, one need which is not, I think, yet fully recognized, and to that need I would refer. It is the need of those who are responsible for advising both African Governments and African people with regard to health to know more about the African himself, both in health and disease, than they do at present.

I referred to this matter in my last Annual Report when under this heading of "Recommendations" I invited attention to the great opportunity for research which was afforded in Kenya by the existence of a fine laboratory building at Nairobi and the existence of unlimited clinical material in our hospitals and in the field. That opportunity still exists, and it has been made greater during the year by some improvements which have been carried out at the mental hospital, and it should be made much greater soon as the result of the erection of the new hospitals in the neighbourhood of the laboratory at Nairobi, for which funds have now been made available.

The experience of the year has not suggested that the need to take advantage of this opportunity is any less than before. On the contrary, reports have been published elsewhere which indicate only too clearly that the need is imperative. I will refer only to three, namely, to Sir John Boyd Orr's Report on "Food, Health and Income," and to the Reports of the Health Organization of the League of Nations on Nutrition and Public Health, published in June, 1935, and on Syphilis Treatment, published in March of that year.

With these reports at their disposal, statesmen and public health administrators in Europe are in possession of some information on which to base policies for the improvement of the dietaries of their people, and for the prosecution of the campaign for the proper treatment of patients suffering from syphilis, while the first two of these reports are of outstanding significance with regard not only to health but to agricultural and general economic policy. In Africa the great majority of the population suffers to a greater or lesser degree from poor nutrition, and certainly to a much greater degree than the population of Europe, while immense numbers suffer from syphilis; but, though we may surmise much, no one to-day could yet write a report on Food, Health and Income in Africa, in which it could be indicated with precision to what extent ill health is the result of poor food, or precisely how the food supplies could best be improved; nor could it be advanced with reason that any particular line of treatment should be adopted as a standard for the cure of syphilis, for we still know but little of African physiology and pathology in relation to nutrition, and practically nothing at all of the course of syphilis among Africans and its proper treatment, though we do know that if the same treatment is required here as in Europe then anything in the nature of adequate treatment is, for the moment at least, entirely out of the question here.

In these circumstances the most important recommendations that can be made to-day with regard to future work in connection with the public

health in East Africa is that as soon as possible medical research into the nature and needs of African man, and of his reactions to not one but a welter of infections, should be adequately endowed.

IV.—PORT HEALTH WORK AND ADMINISTRATION.

The number of vessels which entered Kilindini or Mombasa Harbours during the past three years was as follows :—

	1933	1934	1935
Steamships	599	584	663
Dhows	1,385	1,633	1,391

Steamship tonnage	2,090,134
Steamships medically inspected on arrival	142
Sailing ships, including native vessels, medically inspected on arrival	101
Vessels arriving in port infected	2
Vessels placed under quarantine restrictions or subjected to special sanitary measures	Nil
Passengers medically inspected under special small-pox regulations	9,753
Passengers detained under observation	Nil
Passengers landed subject to surveillance	Nil
Bills of health issued	1,099

PORT HEALTH STAFF.

(*a*) Port Health Officer (employed also as Municipal Medical Officer of Health), and Medical Officer, i/c Infectious Diseases Hospital, Mombasa.

(*b*) Sub-Assistant Surgeon (part-time).

(*c*) Clerk.

(*d*) Two Orderlies (African).

(*e*) Mosquito Searcher (African).

(*f*) Head rat-catcher (African)

(*g*) Office Boy.

(*h*) Labourers, rat-catchers, etc.

EXAMINATION OF SHIPS ON ARRIVAL.

No alteration was made in the system established in 1932 and described in the Report for that year. The majority of ships are not now boarded by the Port Health Officer.

INTELLIGENCE.

The weekly epidemiological bulletin broadcasted by the League of Nations Eastern Bureau at Singapore was received regularly and no serious defects in transmission were experienced.

INFECTIOUS DISEASES IN VESSELS.

Steamers.—No cases of major infectious disease were found on any vessel on arrival but of passengers landed two ultimately developed smallpox.

Dhows.—No infected dhows arrived.

INFECTIOUS DISEASES IN THE PORT.

Ten cases of smallpox occurred. No cases of plague occurred and no infected rats were found.

SPECIAL PREVENTIVE MEASURES AGAINST THE INTRODUCTION OF INFECTIOUS DISEASES

Regulations in reference to the landing of passengers from India continued in force and were unchanged throughout the year.

SANITARY CONDITIONS OF THE PORT.

The port area, wharves, sheds, etc., were maintained as usual in a very satisfactory condition indeed throughout the year. The port area at Kilindini is, so far as sanitary conditions and general cleanliness are concerned, a model of what a port area should be, and I have again the very greatest

pleasure in acknowledging the debt which is due to the Railway and Harbours Administration in this respect, and for its very hearty co-operation at all times in all matters affecting the sanitation of the port.

RAT DESTRUCTION.

The structural and sanitary condition of the wharves and sheds is excellent and not such as to encourage undue breeding.

Rats, trapped, 5,526; Rats examined for plague, 681; Number found infected, Nil.

MOSQUITO BREEDING.

The port area and small craft are consistently searched for mosquito breeding. The whole area is well drained and mosquito breeding is exceptional.

IMPORTATION OF USED CLOTHING.

Six hundred and sixty-two consignments were passed on their accompanying certificates of disinfection.

INSPECTION OF IMPORTED FOODS.

Owing to the services of a Sanitary Inspector not being available no routine examination of imported food was undertaken.

V.—MATERNITY AND CHILD WELFARE.

Maternity and Child Welfare work is carried out by three main agencies as follows :—

(*a*) The Government Medical Department.

(*b*) The Missionary Societies.

(*c*) The Lady Grigg Welfare League.

Government expenditure in connection with maternity and child welfare is not, however, limited to that directly incurred by its own Medical Department. Five Missionary Societies receive Government grants amounting in all to a sum of £3,700 for general medical work which are doubtless of assistance to these Societies in providing maternity relief.

The African Maternity Centre at Pumwani in Nairobi, the Indian Maternity Home, Nairobi, and the African Maternity Centre at Mombasa, which are branches of the Lady Grigg Welfare League, received £1,350, £250 and £700 respectively per annum from Government funds in 1935.

Departmental Work—Urban.

STAFF RETAINED BY GOVERNMENT.

Mombasa.—One woman medical officer and two European health visitors, and African staff.

Eldoret.—One European health visitor and African staff.

One advance made during the year was the transfer of the responsibility for child welfare work in Nairobi from Government to the Municipal Council.

Attendances at Government Urban Child Welfare and Ante-natal Centres House Visits.

The work at all urban centres has shown progress during the year.

Departmental Work—Rural.

A few years ago it was a rare occurrence for a maternity case to be brought to hospital, and even so it was only the hopeless cases which were so brought. To-day all over the Colony women come to our hospitals before labour has commenced and only a lack of beds stands in the way of the establishment of a very extensive indoor maternity service. Great interest in the provision of a maternity service has during the past few years been shown by many Local Native Councils and during the year small maternity blocks erected at the expense of the Councils concerned were opened at Kisii and Keruguya.

Child welfare work is to a greater or lesser degree carried out at all district hospitals to which nursing sisters have been appointed, so far as the increasing demands of their hospitals leave them with time to devote to this activity.

The Work of Missionary Societies.

The Medical Missions throughout the Colony provide in most cases some maternity relief, while in all cases they carry out child welfare work which, though not highly organized, is very considerable in amount and of the very greatest value.

The Work of the Lady Grigg Welfare League.

At the African Maternity Centre at Mombasa 195 labour cases were taken during the year, and at the African Centre in Nairobi 426 labour cases were taken, while eighteen African midwives were in training during the year, of whom three qualified.

At the Indian Maternity Centre in Nairobi, 193 labour cases were taken and four midwives were in training of whom three qualified during the year.

Each of these three institutions is doing exceedingly good work

VI.—HOSPITALS, DISPENSARIES, OUT-DISPENSARIES, VENEREAL CLINICS, THE MENTAL HOSPITAL, MEDICAL WORK CARRIED OUT BY MISSIONARY SOCIETIES, Etc.

The number of patients treated at hospitals and dispensaries during the year was as follows :—

European In-patients	European Out-patients	Asiatic and African In-patients	Asiatic and African Out-patients
1,831	3,228	43,422	353,346

The total number of first attendances in these categories was 401,827 as against 378,452 in the previous year.

In addition 684,841 first attendances were recorded at out-dispensaries in the native reserves.

IN- AND OUT-PATIENTS TREATED AT GOVERNMENT HOSPITALS, DISPENSARIES AND OUT-DISPENSARIES IN 1935

Hospitals in Townships	In-patients	Out-patients
European Hospital, Nairobi	695	—
Native Hospital, Nairobi	6,698	2,218
Mathari Mental Hospital, Nairobi	225	—
Infectious Diseases Hospital, Nairobi	1,446	—
Prison, Nairobi	1,811	7,505
General Dispensary, Nairobi	—	40,894
Loco. Dispensary, Nairobi	—	12,467
Police Dispensary, Nairobi	—	718
European Hospital, Mombasa	190	346
Native Hospital, Mombasa	2,589	31,581
Infectious Diseases Hospital, Mombasa	637	2,362
Child Welfare Centre, Mombasa	—	23,644
European Hospital, Kisumu	258	790
Native Hospital, Kisumu	3,985	20,747
Prison, Kisumu	244	881
Native Hospital, Nakuru	2,042	7,413
Native Hospital, Eldoret	1,504	3,447
Railway Dispensary, Eldoret	883	1,103
Native Hospital, Kitale	839	4,108
Total	24,046	160,224

HOSPITALS IN TURKANA AND NORTHERN FRONTIER PROVINCE AND LAMU

Districts	In-patients	Out-patients	Out-dispensaries
Lodwar	179	3,414	—
Lokitaung	218	2,043	—
Wajir	285	5,110	—
Mandera	70	1,522	—
Moyale	173	7,087	—
Lamu	188	16,935	14,807
Total ..	1,113	36,111	14,807

HOSPITALS IN NATIVE RESERVES

Districts	In-patients	Out-patients	Out-dispensaries
Wesu	742	5,945	24,538
Kabarnet	219	3,093	5,084
Kitui	1,347	17,866	29,569
Kapenguria	336	3,416	—
Narok	251	5,063	11,555
Malindi	161	6,712	339
Kakamega	1,871	12,763	69,987
Kilifi	649	4,723	23,664
Kericho	969	3,996	9,343
Machakos	2,039	15,816	83,103
Muriranjas	384	8,008	—
Kisii	1,440	9,100	50,535
Nyeri	921	24,688	—
Fort Hall	2,900	14,649	36,948
Meru	1,094	15,847	40,656
Kiambu	1,525	11,609	42,288
Central Kavirondo District	—	—	119,627
Kisumu	—	—	34,454
Msambweni, Digo	533	2,368	8,715
Kapsabet	369	5,813	10,575
Keruguya	794	9,683	45,410
Tambach	209	2,497	—
Rumuruti	39	1,538	—
Total ..	18,792	185,193	646,390

During the year the strain which has been placed on all institutions has been, as has been usual in recent years, very great. Throughout the year almost every hospital has been overcrowded, and from almost every hospital it has been necessary to discharge many patients at much too early a period in their convalescence.

SURGERY.

The numbers of surgical operations returned as having been performed in Government Hospitals during the year were as follows :—

	Major	Minor	Totals
On Europeans	229	296	525
On Asians	140	122	262
On Africans	1,954	7,343	9,297
Total ..	2,323	7,761	10,084

Of the 10,084 operations performed on Africans over 6,227 were performed under general anæsthesia. This represents an increase of about 1,000 operations so performed over the record of the previous year.

ANÆSTHETICS.

Anæsthetics in Native Hospitals are administered either by a Medical Officer, a European Nursing Sister, a Sub-Assistant Surgeon, or by an experienced African Hospital Assistant or Dresser; they are never administered, however, except by a qualified Medical Officer or Sub-Assistant Surgeon, or except under the immediate personal supervision of such an officer.

In the course of the 6,000 odd general anæsthetics which were administered to Africans during the year eight deaths occurred, either during induction, during the anæsthesia or shortly afterwards, as compared with nine deaths among 5,000 odd general anæsthesias in the preceding year.

In three of these cases a persistent thymus was found post-mortem. In one case the patient was a woman who had been in labour for four days, and whose condition was almost hopeless on admission. In one case volvulus was complicated by nephritis and malaria. In one case the operation was for a large malignant tumour of the thigh, and in another the patient was suffering from septicæmia; no post-mortems were allowed in these two cases. In one case the operation was undertaken for the repair for a severe injury, and vomiting and blockage of the air passages occurred.

In no case did the administration of the anæsthetic appear to have been unsatisfactory, nor any precaution omitted.

TRAINING OF AFRICANS.

The training of Africans for medical and health work is carried out at, or in connection with, the Medical Training Depot at the Native Hospital, Nairobi. Three types of training are provided as follows: In general nursing, in dispensing, and in rural health work. Up to the present systematic training of these types has only been provided for males as but few African females in Kenya have so far received a sufficiently good general education to enable them to benefit from the courses provided.

The training of male nurses, or "African Hospital Assistants" as they are termed, is carried out entirely at the Native Hospital, Nairobi. The training of dispensers, or "Compounders", is carried out at the General Dispensary, Nairobi, and the training of health workers at the Jeanes School, Kabete. On the completion of training the hospital assistants, compounders, and health workers are drafted to units in the smaller towns, or in the native reserves where they are doing much to raise the general standard of work at hospitals and dispensaries, and in the field.

The training of African girls in midwifery is carried out at the Lady Grigg Maternity Centres in Nairobi and Mombasa.

Provision was made during the year for the sending of two Africans in 1936 to Makerere College in Uganda, where they will receive a type of training somewhat similar to that provided for Sub-Assistant Surgeons in India.

VENEREAL CLINICS.

Special clinics for the treatment of venereal disease in women were held weekly at Mombasa at each of five centres and at one in Nairobi, and for men at three clinics weekly in Nairobi and at one in Mombasa. Elsewhere in the Colony cases of venereal disease are treated at all general and out-dispensaries. The value of the anti-syphilitic treatment provided is probably considerable from the point of view of the curtailment of the period of infectivity, but its value in respect of the cure of the individual patient must, as a rule, be problematical, as the number of patients that can be persuaded to attend for long courses of treatment, after their more distressing symptoms have been relieved, is not yet large. It is, however, satisfactory that change is gradually taking place with regard to attendances for treatment, and that the numbers attending for more than a few treatments are increasing.

THE MATHARI MENTAL HOSPITAL.

THE CARE AND TREATMENT OF AMENTS AND OF PATIENTS SUFFERING FROM MENTAL DISORDERS.

During the year a second new ward to accommodate about thirty patients was completed, and approval was given for the construction of ward accommodation for a further sixty cases.

The following note summarizes the work for the year :—

DEATHS

PERCENTAGE OF DEATHS TO TOTAL OF PATIENTS, 1927 TO 1935

YEAR	Patients	Deaths	Percentage
1927	204	32	15·7
1928	225	23	10·2
1929	250	25	10
1930	278	34	13·6
1931	236	38	16
1932	167	10	6
1933	153	5	3·26
1934	199	14	7·03
1935	225	8	3·55

DISCHARGES, 1935

European	5 Males	4 Females
Asian	5 Males	3 Females
African	22 Males	6 Females

GENERAL STATISTICS.

The following table shows the number of admissions, discharges and deaths for the past three years : 1933, 1934 and 1935.

	Admissions			Discharges			Deaths		
	1933	1934	1935	1933	1934	1935	1933	1934	1935
Males	27	55	50	12	34	32	5	12	6
Females	14	16	39	7	15	13	—	2	2
TOTAL ..	41	71	89	19	49	45	5	14	8

The total number of patients treated during the year was 225.

Males	151
Females	74

The total number of patient days in hospital were :—

	1933	1934	1935
European—Male and Female	2,167	1,974	1,244
Native—Male	30,351	33,468	37,329
Native—Female	10,549	12,435	17,708
TOTAL ..	43,067	47,877	56,281

	1933	1934	1935
The average daily number was	117·99	131·16	154·19

Remaining at the end of 1933 .. 128 Male and Female, All Races—(Males 93. Females 35).

Remaining at the end of 1934 .. 136—Males 101, Females 35.

Remaining at the end of 1935 .. 172—Males 113, Females 59.

European Section.

The total number treated during 1935 was 13 (males 7, females 6). The details are :—

	Males	Females
Remaining from 1934	3	1
Admitted during 1935	4	5
Discharged during 1935	5	4
Deaths during 1935	1	—
Remaining at end of 1935	1	2

Total Number of Days Residence in Hospital :—

	1935
Of those discharged	6,398
Of those died	2,335
Of those remaining	1,910
Total ..	10,643

Asiatic Section.

The total number treated during the year 1935 was 14 (males 8, females 6, including one male criminal patient). The details are :—

		Males	Females
Remaining from 1934		2	2
Admitted during 1935		6	4
Discharged during 1935		5	3
Died during 1935		—	—
Remaining at end of 1935		3	3
Indian Male	3		
Goan Male	—		
Indian Female	2		
Seychelle Female	1		
Total ..	6		

Total number of days' residence in hospital of :—

Those discharged during 1935..	222
Those remaining at end of 1935	14,522
Those who died during 1935	Nil
Total ..	14,744

African Section.

The total number treated during the year was 198, including 17 male and 4 female criminal patients. The details are :—

	Males	Females
Remaining from 1934	96	32
Admitted during 1935	40	30
Discharged during 1935	23	6
Died during 1935	5	2
Remaining at end of 1935	109	54

The total number of days' residence in hospital of :—

	Males	Females
Those discharged during 1935.. ..	9,041	1,952
Those remaining at end of 1935 ..	138,117	66,216
Those who died in 1935	4,111	2,590
Total ..	151,269	70,758

Patients were admitted during the year from the following places :—

	Males	Females
Nakuru	6	5
Machakos	3	2
Voi	1	—
Nairobi	12	15
Meru	3	—
Kericho	3	—
Kajiado	1	—
Kisumu	2	1
Eldoret	5	5
Mombasa	5	4
Fort Hall	2	1
Marsabit	1	—
Thika	1	—
Kisii	1	—
Nyeri	1	—
Narok	1	—
Embu	1	1
Kitale	—	1
Kiambu	—	1
Kijabe	—	1
Kilifi	—	1
Uganda	1	1
Total ..	50	39

MEDICAL WORK CARRIED OUT BY MISSIONARY SOCIETIES.

The number of hospital beds maintained by the Missionary Societies receiving medical grants from Government, the numbers of patients treated in these institutions, and the amounts of the grants given are shown in the following tables :—

Missions	Place	No. of Beds	In-patients	Out-patients	Out-dispensary Patients	Confinements	Amount of Grant
							£
C.S.M. .	Kikuyu	90	1,289	14,944	Nil	189	450
,, .	Chogoria ..	60	659	10,312	12,000*	24	240
,, .	Tumutumu ..	96	1,717	16,226	21,032	413	1,050
C.M.S. .	Kaloleni	84	872	32,443	—	5	940
,, .	Maseno	65	1,473	11,596	22,572	156	420
S.D.A. .	Kendu	61	900	20,585	—	109	400
M.M.S. .	Meru	20	316	—	—	12	100
N.M.S. .	Ngao	35	—	1,674	—	20	100

*Approximately.

C.S.M.—Church of Scotland Mission.
C.M.S.—Church Missionary Society.
S.D.A.—Seventh Day Adventists.
M.M.S.—Methodist Missionary Society.
N.M.S.—Neukirchen Mission Society.

At all the above-mentioned hospitals a qualified medical practitioner and one or more European sisters are employed.

VII.—PRISONS AND ASYLUMS.

The vital statistics for the prisons of the Colony for 1935 and for the last four years are as follows :—

Year	Daily Average in Prison	Admissions to Hospital	Daily Average on Sick List	Percentage of Total Inmates	Deaths
				Per cent	
1935	2,751	2,817	120	4·4	60
1934	3,439	4,180	152	4·4	95
1933	2,893	2,967	112	3·9	41
1932	2,642	1,882	93	3·5	33

The sixty deaths were from natural causes, and were due to the following diseases :—

Diseases	Nairobi Prison	All Other Prisons	Total
Pneumonia	10	19	29
Dysentery	1	6	7
Debility	4	2	6
Diseases of the Liver	1	2	3
Malaria	1	1	2
Meningitis	1	1	2
Various	4	7	11
Total ..	22	38	60

There were nineteen fewer deaths from pneumonia in 1935 than in 1934, and this reduction, together with the general reduction of the death rate, is probably largely due to the fact that overcrowding of the prisons was much less serious in the latter year.

VIII.—METEOROLOGY.

The statistics supplied by the Director of the British East African Meteorological Service are contained in Table IV appended to this Report.

A. R. PATERSON,
Director of Medical Services.

RETURNS.

TABLE I.

MEDICAL STAFF.

A. R. Paterson, Director of Medical Services.

F. J. Carlyle Johnstone, Deputy Director of Medical Services.

Senior Medical Officer, Administration	1
Senior Medical Officers	3
Surgical Specialist	1
Medical Officers	38
Bacteriologists	4
Matron	1
Housekeeper	1
Nursing Sisters and Health Visitors	52
Sanitary Inspectors	13
Assistant Surgeons, European	2
Assistant Surgeons, Asiatic	2
Sub-Assistant Surgeons (4 in abeyance)	24

PRINCIPAL CHANGES.

(1) Dr. R. P. Cormack to be Senior Medical Officer with effect from 29-11-35.

(2) Miss K. E. Schaltz to be Housekeeper, European Hospital, Nairobi, with effect from 1-6-35, post newly created.

Resignations.

Nursing Sisters, 3; Clerk, European, 1; Medical Officer, 1; Ward-master, 1.

Appointments Terminated.

District Surgeon, 1; Clerks, Non-European, 2; Compounders, Non-European, 3.

Rctirements.

Senior Medical Officer, 1; Assistant Surgeon, Non-European, 1; Nursing Sister, 1.

TABLE II.

Financial.

The sanctioned Medical Budget for the year 1935 was a total of £200,567 as compared with £201,875 for the preceding twelve months.

The headings under which the vote was arranged were as follows :—

MEDICAL DEPARTMENT

	Estimates	Actual Expenditure
	£	£
ADMINISTRATIVE DIVISION—Personal Emoluments ..	9,495	9,299
MEDICAL DIVISION—Personal Emoluments	28,339	29,892
SANITATION DIVISION—Personal Emoluments	4,907	5,059
LABORATORY DIVISION—Personal Emoluments	12,406	12,378
„ „ Other Charges	26,513	26,389
£	81,660	83,017
NATIVE SERVICES—Personal Emoluments	72,858	68,741
„ „ Other Charges	45,299	51,693
£	118,157	120,434
EXTRAORDINARY EXPENDITURE	750	1,250

The total amount of revenue collected was as follows :—

	£	£
Hospital Fees	8,220	
Bills of Health	868	
Infectious Diseases Hospital, Fees, Nairobi Municipality	281	
Infectious Diseases Hospital, Fees, Mombasa Municipality	407	
Fees from Medical Research Laboratory	3,389	
Registration Fees	46	
Sales of Medicines, etc.	2,000	
Hire of Government Motor Vehicles (Ambulances) ..	47	
		15,258
Reimbursement from Uganda Government on Account of Zanzibar Sanitary Station	412	
Reimbursement from Kenya and Uganda Railways and Harbours on Account of Medical Services	5,561	
Reimbursement Mombasa Municipality on Account of Public Health Staff	1,063	
Reimbursement on Account of Messing Expenses, European Hospital, Nairobi	438	
		7,474
		£ 22,732

Last year the total revenue collected amounted to £18,520.

TABLE III.

Return of Statistics of Population for the Year 1935.

Colony and Protectorate of Kenya	Europeans and Whites	Africans and Others	Asiatics
Number of inhabitants in 1934 ..	*16,812	Africans— †3,024,975 Arabs and Others ‡13,512	Indians—†39,644 Goans—‡3,979
Number of births registered in 1935	331	41	Indians—403 Goans—81
Number of deaths registered in 1935	153	1,540	Indians—373 Goans—25
Number of immigrants during 1935	5,387	2,212	Indians—8,039 Goans—775
Number of emigrants during 1935	5,318	1,905	Indians—7,163 Goans—704
Number of inhabitants during 1935	No figures available beyond 1931 Census	§3,012,421	No figures available beyond 1931 Census

*1931 Census. †Estimated 31–12–34. ‡1931 Census. §Estimated 31–12–35

TABLE IV.

Meteorological Return for the Year 1935

TABLE SHOWING (TOTAL) RAINFALL AT VARIOUS POINTS IN THE DIFFERENT AREAS

Coast Area.

Station.	1935. Rainfall in inches
Malindi	35 08
Mombasa	50·92 ,,
Mazeras	34·88 ,,
Mackinnon Road ..	40 09 ,,
Voi	14·76 ,,
Taveta	22 22 ,,

Mountainous Area.

	Rainfall in inches
Masongaleni	27·54
Makindu	14·84 ,,
Athi River	24·28 ,,
Kiu	20·10 ,,
Nairobi	27·67 ,,
Kabete Reformatory, (Near Nairobi) ..	41·52 ,,

Mountainous Area—(*Contd*).

Station	1935. Rainfall in inches
Naivasha	23·29
Nakuru	26·63 ,,
Molo	43·36 ,,
Eldama Ravine	51·33

Nyanza and Kenya Province.

	Rainfall in inches
Lumbwa	40·07
Muhuroni	56·23 ,,
Kisumu	46·89 ,,
Mumias (Kakamega) ..	77·08 ,,
Kericho	73·80 ,,
Nandi	53·35 ,,
Fort Hall	42·35 ,,
Nyeri	38·76 ,,
West Kenya	31·36 ,,

METEOROLOGICAL RETURN—(*Contd.*)

MONTH	TEMPERATURE					RAINFALL			WINDS	
	Solar Maximum	Minimum on Grass	Shade Maximum	Max. and Min. mean combined	Shade Minimum	Amount in inches	Degree of Humidity (%)		General Direction	Average Force 1–10
							8·30	14·30		
NAIROBI										
January ..	..	..	81·9	68.5	55·0	0·06	62	33	NE	3
February ..	..	..	78·8	68·5	58·2	6·58	77	46	NE	2
March ..	..	..	7[illegible]·7	69·9	60·1	1·64	83	43	E	2
April ..	..	..	79·4	69·3	59·2	2·56	84	48	E	2
May ..	..	..	76·8	67·9	59·1	4·63	84	52	E	2
June ..	..	..	73·4	64·9	56·4	2·53	84	63	E	2
July ..	..	..	73·4	61·6	49·8	0·00	79	48	SE	2
August ..	..	..	73·8	63·3	52·7	1·33	78	49	SE	1
September ..	..	..	78·5	66·5	54·4	0·33	78	43	E	1
October ..	..	..	77·8	67·4	57·0	1·41	81	48	E	2
November ..	..	..	76·6	67·8	59·0	3·38	83	53	E	2
December ..	..	..	76·9	67·5	58·2	3·22	79	52	E	2
MOMBASA										
January ..	..	..	88·1	81·9	75·8	0·10	73	66	SE	1
February ..	..	..	90·6	83·8	77·0	1·02	77	66	N	2
March ..	..	..	90·0	83·7	77.3	4·28	80	71	W	1
April ..	..	..	89·6	83·3	77·1	4·41	78	69	SW	2
May ..	..	..	84·2	79·0	73·8	15·26	85	77	SW	2
June ..	..	..	83·1	77·9	72·8	5·64	83	75	SSW	2
July ..	..	..	81·6	76·1	70·5	2·55	79	73	SSW	2
August ..	..	..	81·2	75·4	69·6	4·05	83	73	SSW	2
September ..	..	..	84·0	77·9	71·9	3·88	77	71	SSW	2
October ..	..	..	85·0	79·1	73·2	2·36	77	71	S	2
November ..	..	..	88·5	82·2	75·9	2·67	76	68	S	2
December ..	..	..	88·7	82·1	75·5	4·70	75	72	N	2
KISUMU										
January ..	..	..	84·1	73·9	63·8	1·96	49	52	NE	2
February ..	..	..	80·2	72·2	64 2	6·92	70	65	NE	2
March ..	..	..	82 7	73·9	65·0	2·63	67	61	ENE	2
April ..	..	..	81·4	72·7	64·1	9·30	72	65	ENE	3
May ..	..	..	79·8	72·1	64·5	7·81	77	68	E	2
June ..	..	..	78·3	70·7	63·1	4·50	76	68	ENE	3
July ..	..	..	79·7	71·0	62·3	2 58	72	61	E	3
August ..	..	..	79·9	70 7	61·5	1·81	64	60	E	3
September ..	..	..	80·9	71·5	62·2	2·18	65	64	E	2
October ..	..	..	82·0	72·7	63·5	2·33	64	60	E	2
November ..	..	..	83·2	73·5	63·9	1·48	63	61	E	2
December ..	..	..	83.0	76·1	69·3	3·39	64	65	SE	2
KABETE OBSERVATORY										
January ..	114·1	46·6	77·4	65·6	53·8	0·00	62	34	NNE	2
February ..	112·8	52·5	74·7	65·7	56·7	6.32	78	48	NE	1
March ..	114·6	55·2	75·4	66·9	58·5	1·54	85	48	NE	1
April ..	113·4	53·8	73·9	65·9	57 9	4·45	85	50	NE	1
May ..	110·4	53 0	71·6	64·5	57·4	3·88	85	59	E	2
June ..	..	51·7	68·7	61·8	54·9	3·50	83	65	SE	1
July ..	..	44·3	68·7	59·1	49·5	0·01	79	52	SE	1
August ..	..	47·2	69·3	60·3	51·3	1·28	85	53	SE	1
September ..	..	48·7	74·3	63·5	52·7	1·31	81	45	E	1
October ..	..	52·8	73·8	64·5	55·2	2·22	84	47	E	2
November ..	..	56·0	72·0	64·5	57·0	5·72	84	55	E	2
December ..	..	56·2	71·8	64·1	56·5	3·79	85	56	ENE	2

TABLE V.

COLONY AND PROTECTORATE OF KENYA

RETURN OF DISEASES (In-Patients)

For the Year 1935

DISEASES	EUROPEAN OFFICIALS					EUROPEAN GENERAL POPULATION (NON-OFFICIAL)					NON-EUROPEAN OFFICIALS (including ASIATICS)					NATIVE GENERAL POPULATION (including ASIATICS)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
I.—EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																				
1. Enteric Group—																				
(*a*) Typhoid Fever	1	3	1	4	..	1	19	1	20	4	..	1	..	1	..	6	131	42	137	7
(*b*) Paratyphoid A.	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	1	..	1	..
(*c*) Paratyphoid B.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	9	1
(*d*) Type not defined	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	17	3	18	3
T. A. B. reaction	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Typhus	..	2	..	2	..	..	4	..	4	..	..	..	..	..	..	..	1	1	1	..
3. Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	180	9	183	2
4. Undulant Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	.	2	..
5. Malaria—Clinical	..	28	..	28	..	..	49	..	49	..	1	278	..	279	1	54	1,715	13	1,769	28
(*a*) Tertian	..	9	..	9	..	..	3	..	3	..	..	7	..	7	..	5	210	1	215	7
(*b*) Quartan	..	2	..	2	..	..	2	..	2	..	..	1	..	1	..	4	165	1	169	5
(*c*) Aestivo-autumnal	..	70	..	70	..	1	122	3	123	..	..	99	..	99	2	36	3,809	104	3,845	32
(*d*) Undifferentiated	..	9	..	9	..	..	7	..	7	..	..	105	..	105	..	..	57	..	57	..
(*e*) Cachexia	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	33	..	33	..
(*f*) Blackwater	..	2	..	2	..	..	5	3	5	..	..	1	..	1	..	1	20	5	21	1
Cerebral	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	15	6	15	..
6. Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	8	..
Modified Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..
Alastrim—Vaccinia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Measles	..	2	..	2	..	..	7	..	7	..	..	1	..	1	..	1	243	..	244	19
8. Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
9. Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	77	7	81	6
10. Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	7	..
11. Influenza	1	96	..	97	2	1	19	..	20	..	3	409	..	412	..	26	687	3	713	25
12. Miliary Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Mumps	..	..	..	..	..	..	1	..	1	..	..	2	..	2	..	2	136	..	138	2
14. Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Epidemic Diarrhœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..
16. Dysentery—																				
(*a*) Amœbic	2	55	..	57	1	..	64	..	64	2	..	18	..	18	..	15	652	33	667	12
(*b*) Bacillary	..	7	..	7	..	..	9	..	9	..	..	2	..	2	..	1	60	2	61	2
(*c*) Undefined or due to other causes	..	8	..	8	..	..	18	1	18	..	..	7	..	7	..	7	254	30	261	6

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
I.—Epidemic, Endemic and Infectious Diseases—(*Contd.*)																				
17. Plague—																				
(*a*) Bubonic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	16	26	1
(*b*) Pneumonic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
(*c*) Septicæmic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	4	..
(*d*) Undefined	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18. Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19. Spirochætosis ictero-hæmorrhagica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	106	132	3	238	44
21. Erysipelas	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	8	3	8	..
22. Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	15	2	16	2
23. Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24. Epidemic Cerebro-spinal Fever	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	3	358	214	361	9
25. Other Epidemic Diseases—																				
(*a*) Rubeola (German Measles)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1
(*b*) Varicella (Chicken-pox)	1	1	..	2	..	..	1	..	1	..	1	1	..	2	..	17	591	..	608	22
(*c*) Kala-azar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Phlebotomus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Dengue	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*f*) Epidemic Dropsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*g*) Yaws	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	33	513	3	546	26
(*h*) Trypanosomiasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	1	14	3
26. Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
27. Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	70	4	74	4
28. Rabies	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	..	13	..
29. Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	33	17	34	..
30. Mycosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	6	..
31. Tuberculosis, Pulmonary and Laryngeal	..	1	..	1	..	..	5	1	5	1	..	2	..	2	..	36	398	120	434	39
32. Tuberculosis of the Meninges or Central Nervous System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	10	10	14	..
33. Tuberculosis of the Intestines or Peritoneum	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	8	1	8	..

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
I.—Epidemic, Endemic and Infectious Diseases—(*Contd.*)																				
34. Tuberculosis of the Vertebral Column	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	9	2	11	3
35. Tuberculosis of Bones and Joints	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	61	2	68	14
36. Tuberculosis of other Organs—																				
(*a*) Skin or Subcutaneous Tissue (Lupus)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	8	1	10	2
Potts Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	..
(*b*) Bones	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	22	..	30	4
(*c*) Lymphatic System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	130	5	146	6
(*d*) Genito-urinary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	3	..
(*e*) Other Organs	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	1	13	1	14	..
37. Tuberculosis disseminated—																				
(*a*) Acute	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
(*b*) Chronic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1
38. Syphilis—																				
(*a*) Primary	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	41	642	..	683	21
(*b*) Secondary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	189	..	201	11
(*c*) Tertiary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	96	7	104	3
(*d*) Hereditary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	47	9	49	4
(*e*) Period not indicated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	35	444	6	479	26
Cerebral	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Priapism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
39. Soft Chancre	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	9	..
40. *A.*—Gonorrhœa and its complications	..	..	..	..	..	..	7	..	7	..	..	..	..	..	..	44	1,132	2	1,176	60
B.—Gonorrhœal Ophthalmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	..	16	..
C.—Gonorrhœal Arthritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	16	..	17	..
D.—Granulomo Venereum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3	..
41. Septicæmia	..	..	..	..	..	..	3	1	3	..	..	1	1	1	..	2	31	28	33	1
42. Other Infectious Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pyaemia	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	6	1	6	..
II.—General Diseases not mentioned above.																				
43. Cancer or other Malignant Tumours of the Buccal Cavity	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17	2	17	1
44. Cancer or other Malignant Tumours of the Stomach or Liver	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	24	12	26	3

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
II.—General Diseases not mentioned above—(*Contd.*)																				
45. Cancer or other Malignant Tumours of the Peritoneum Intestines, Rectum	..	..	..	..	..	..	3	1	3	..	..	1	..	1	..	..	4	1	4	..
46. Cancer or other Malignant Tumours of the Female Genital Organs	..	..	..	..	..	1	1	1	2	..	..	..	..	..	..	..	13	3	13	..
47. Cancer or other Malignant Tumours of the Breast	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	2	6	2
48. Cancer or other Malignant Tumours of the Skin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	27	4	30	1
49. Cancer or other Malignant Tumours of Organs not specified	..	..	..	..	..	..	3	1	3	..	..	..	..	..	..	3	57	15	60	4
Abscess Brain	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..
50. Tumours, Non-malignant	..	1	..	1	..	..	3	..	3	..	..	2	..	2	..	11	197	3	208	13
51. Acute Rheumatism	..	1	..	1	..	..	5	..	5	..	..	5	..	5	..	1	104	..	105	3
52. Chronic Rheumatism	..	5	..	5	..	..	..	..	..	..	..	36	1	36	1	9	259	..	268	7
Rheumatic Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatoid Arthritis	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	2	..
Myalgia	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	31	..	32	1
53. Scurvy (including Barlow's Disease)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	1	11	..
54. Pellagra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55. Beri-beri	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
56. Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
57. Diabetes (not including Insipidus)	..	1	..	1	..	..	4	..	4	1	..	2	..	2	..	..	11	2	11	..
58. Anæmia—																				
(*a*) Pernicious	..	1	..	1	..	..	1	..	1	1	..	1	..	1	..	..	8	4	8	..
(*b*) Other Anæmias and Chlorosis	..	..	..	..	..	..	1	..	1	..	..	3	..	3	..	21	183	10	204	8
59. Diseases of the Pituitary Body	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
60. Diseases of the Thyroid Gland—	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	14	3	14	..
(*a*) Exophthalmic Goitre	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3	..
(*b*) Other Diseases of the Thyroid Gland	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Myxœdema	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	1	13	..
61. Diseases of the Para-thyroid Glands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
62. Diseases of the Thymus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..

RETURN OF DISEASES—IN-PATIENTS—*(Contd.)*

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
II.—General Diseases not mentioned Above—*(Contd.)*																				
63. Diseases of the Supra-renal Glands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
64. Diseases of the Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	50	2	51	3
65. Leukæmia—																				
(*a*) Leukæmia	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	1	10	2	11	..
(*b*) Hodgkin's Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	..
66. Alcoholism	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	11	1	11	..
67. Chronic poisoning by mineral substances (Lead, Mercury, etc.)	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	3	1	3	..
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
69. Other General Diseases—																				
Auto-intoxication	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..
Purpura Hæmorrhagica	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	1	..	1	..
Hæmophilia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaena Neonatorum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
Diabetes Insipidus	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..
Paroxysmal Haemoglobinuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Migraine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Food Deficiency	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	2	..
Tetany	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Acidosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III.—Affections of the Nervous System and Organs of the Senses.																				
70. Encephalitis (not including Encephalitis Lethargica)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	3	11	1
Encephalitis Myelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
71. Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	82	59	83	3
Parkinson's Diseaes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
72. Locomotor Ataxia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
73. Other affections of the Spinal Cord	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	1	4	1	5	1
74. Apoplexy—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Hæmorrhage	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	7	3	7	..
(*b*) Embolism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	2	..
(*c*) Thrombosis	..	1	..	1	..	..	1	1	1	..	..	1	..	1	..	..	3	1	3	..
Cerebral	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
III.—Affections of the Nervous System and Organs of the Senses—(*Contd.*)																				
75. Paralysis—																				
(*a*) Hemiplegia	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	1	23	1	24	2
(*b*) Other Paralyses	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	46	1	46	1
76. General Paralysis of the Insane	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..
77. Other forms of Mental Alienation	..	..	..	..	..	4	11	1	15	3	..	..	..	..	..	134	173	12	307	194
78. Epilepsy	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	5	73	2	78	2
79. Eclampsia Convulsions (non-puerperal) 5 years or over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
80. Infantile Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	7	..
81. Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
82. *A.*—Hysteria	..	..	..	..	..	..	3	..	3	..	..	2	..	2	..	..	27	..	27	..
B.—Neuritis	1	5	..	6	..	..	3	..	3	..	..	15	..	15	..	1	39	..	40	2
C.—Neurasthenia	..	8	..	8	..	..	7	..	7	..	..	4	..	4	..	..	3	..	3	..
D.—Neuralgia	..	..	..	..	..	..	..	..	..	..	..	9	..	9	..	..	124	..	124	..
E.—Headache	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4	..
F.—Neurosis	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
83. Cerebral Softening	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
,, Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
84. Other affections of the Nervous System, such as Paralysis Agitans	..	1	..	1	..	..	2	..	2	..	..	..	..	..	..	..	33	3	33	1
85. Affections of the Organs of Vision	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Conjunctivitis	..	4	..	4	..	..	1	..	1	..	..	15	..	15	..	9	390	..	399	5
(*b*) Trachoma	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	3	39	..	42	3
(*c*) Tumours of the Eye	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	29	..	30	2
(*d*) Other affections of the Eye	..	3	..	3	..	..	7	..	7	..	..	23	..	23	..	10	302	..	312	15
86. Affections of the Ear or Mastoid Sinus	..	2	..	2	..	1	13	..	14	..	..	10	..	10	..	4	169	5	173	4
Concussion	..	1	..	1	..	1	2	..	3	..	..	1	..	1	..	..	3	..	3	..
Sciatica	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	7	..	7	..
Insomnia	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV.—Affections of the Circulatory System.																				
87. Pericarditis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	2	6	1
88. Acute Endocarditis or Myocarditis	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	6	1	6	1
89. Angina Pectoris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population (Non-official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
IV.—Affections of the Circulatory System—(*Contd.*)																				
90. Other Diseases of the Heart—	..	3	..	3	..	..	1	..	1	1	..	2	..	2	..	..	17	..	17	2
(*a*) Valvular—	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45	26	45	1
Mitral	..	..	..	..	..	..	3	..	3	1	..	3	..	3	..	..	49	9	49	3
Aortic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	5	1
Tricuspid	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*b*) Myocarditis	..	2	..	2	1	..	3	1	3	.	..	4	..	4	..	..	21	8	21	..
91. Diseases of the Arteries—																				
(*a*) Aneurism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	1	5	..
(*b*) Arterio-sclerosis	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	1	..	2	1
(*c*) Other Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
92. Embolism or Thrombosis (non-cerebral)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
93. Diseases of the Veins—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hæmorrhoids	..	10	..	10	..	..	7	..	7	..	..	5	..	5	..	..	17	..	17	..
Varicose Veins	..	..	..	..	..	..	..	..	..	..	..	12	..	12	..	..	2	..	2	..
Phlebitis	..	1	..	1	.	..	..	..	..	..	..	..	..	..	..	..	4	..	4	..
94. Diseases of the Lymphatic System—	..	.	..	..	..	..	2	..	2	..	..	..	..	..	..	..	12	..	12	1
Lymphangitis	..	1	..	1	..	..	3	..	3	..	..	..	..	..	..	1	16	..	17	..
Lymphadenitis, Bubo (non-specific)	..	2	..	2	..	..	1	..	1	..	..	1	..	1	..	8	139	1	147	5
Adenitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
95. Hæmorrhage of undetermined cause	..	1	..	1	.	..	4	1	4	..	..	1	..	1	..	..	7	3	7	..
96. Other affections of the Circulatory System	..	..	..	..	..	..	3	..	3	..	..	4	..	4	..	..	8	1	8	..
Epistaxis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pink Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Affections of the Respiratory System.																				
97. Diseases of the Nasal Passages—																				
Adeniods	..	..	..	..	..	..	2	..	2	..	..	1	..	1	..	..	13	..	13	1
Polypus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	10	..
Rhinitis	..	..	..	..	..	..	1	..	1	..	..	4	..	4	..	..	5	..	5	..
Coryza	..	10	..	10	..	..	3	..	3	..	..	22	..	22	..	2	63	..	65	..
Sinusitis	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaing in Hospital fro previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
V.—Affections of the Respiratory System—(*Contd.*)																				
98. Affections of the Larynx—																				
Laryngitis	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	33	1	33	..
99. Bronchitis—																				
(*a*) Acute	..	4	..	4	..	..	15	..	15	..	..	21	..	21	..	28	1,060	7	1,088	27
(*b*) Chronic	..	16	..	16	..	..	3	1	3	..	1	39	..	40	..	5	111	13	116	6
100. Broncho-pneumonia	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	14	493	179	507	24
101. Pneumonia—																				
(*a*) Lobar	..	2	..	2	..	..	6	3	6	..	..	2	..	2	1	61	1,461	358	1,522	49
(*b*) Unclassified	..	2	..	2	..	..	4	..	4	..	..	3	..	3	..	2	290	93	293	7
102. Pleurisy, Empyema	..	2	..	2	..	..	4	..	4	..	..	2	..	2	1	2	83	5	85	5
103. Congestion of the Lungs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	..
104. Gangrene of the Lungs.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	6	..
105. Asthma	..	4	..	4	..	..	6	..	6	..	1	15	..	16	1	4	95	1	99	3
106. Pulmonary Emphysema ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
107. Other affections of the Lungs ..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	2	24	3	26	..
Pulmonary Spirochætosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pleurodynia	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	1	..	1	..
F·B. in Bronchus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VI.—Diseases of the Digestive System.																				
108. *A*.—Diseases of Teeth or Gums—	..	4	..	4	..	..	1	..	1	..	..	1	..	1	..	..	15	..	15	..
Caries	..	5	..	5	..	..	9	..	9	..	1	14	..	15	..	1	50	..	51	1
Pyorrhœa	..	1	..	1	..	..	..	..	..	..	..	10	..	10	..	2	24	..	26	..
B.—Other affections of the Mouth	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	..
Stomatitis	..	2	..	2	..	..	5	..	5	..	..	3	..	3	..	2	74	4	76	7
Glossitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
109. Affections of the Pharynx or Tonsils—	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	..	9	..	9	..
Quinsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tonsillitis	..	32	..	32	..	1	64	..	65	..	..	31	..	31	..	..	238	2	238	7
Pharyngitis	..	3	..	3	..	..	4	..	4	..	..	9	..	9	..	..	55	1	55	..
Angina Ludovici	..	..		..		..	..	..	..	..	..	..		..	..	..	1	1	1	..

RETURN OF DISEASES—IN-PATIENTS—*(Contd.)*

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
VI.—Diseases of the Digestive System—*(Contd.)*.																				
110. Affections of the Oesophagus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
111. *A.*—Ulcer of the Stomach	..	2	..	2	..	..	2	1	2	..	..	..	..	..	..	..	4	2	4	..
B.—Ulcer of the Duodenum	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	..	6	..	6	..
112. Other affections of the Stomach—	..	6	..	6	..	..	8	..	8	..	..	..	..	..	..	..	3	..	3	..
Gastritis	..	10	..	10	..	..	6	..	6	..	..	18	..	18	..	1	57	3	58	1
Dyspepsia	..	9	..	9	..	..	7	..	7	..	..	12	..	12	..	4	86	..	90	..
113. Diarrhœa and Enteritis—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Under two years	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	151	17	151	3
114. Diarrhœa and Enteritis—																				
Two years and over	..	21	..	21	..	..	13	..	13	..	1	20	..	21	..	1	281	9	282	7
Colic	..	..	..	..	..	..	..	..	..	..	1	8	..	9	..	..	24	..	24	..
Colitis	..	16	..	16	..	..	9	..	9	..	..	23	..	23	..	..	59	2	59	2
Gastro Enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	7	7	..
114A. Sprue	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Septic Throat	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
115. Ankylostomiasis	..	..	..	..	..	..	7	..	7	..	..	2	..	2	..	25	760	3	785	22
116. Diseases due to Intestinal Parasites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Cestoda (Tænia)	..	2	..	2	..	..	6	..	6	..	..	1	..	1	..	12	1,081	1	10,93	25
(*b*) Trematoda (Flukes)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1
(*c*) Nematoda (other than Ankylostoma)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	..	16	..
Ascaris	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	26	862	..	888	18
Trichocephalus dispar.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	70	..	76	4
Trichina	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
Dracunculus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	.	6	..
Strongylus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	28	..	29	..
Oxyuris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	..	18	..
(*d*) Coccidia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Other Parasites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	56	3	57	1
(*f*) Unclassified	..	1	..	1	..	..	2	..	2	..	..	..	..	..	..	4	458	..	462	16
117. Appendicitis	..	3	..	3	..	..	37	1	37	4	..	5	..	5	..	..	18	..	18	2
118. Hernia	..	1	..	1	..	..	5	..	5	..	..	1	..	1	..	6	197	12	203	10
119. *A.*—Affections of the Anus-Fistula, etc.	..	4	..	4	..	..	3	..	3	..	..	5	..	5	..	2	35	..	37	1

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
VI.—Diseases of the Digestive System—(*Contd.*)																				
B.—Other affections of the Intestines—	..	..	..	..	..	..	11	..	11	1	..	..	..	..	..	..	42	13	42	..
Enteroptosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Constipation	..	..	..	..	..	..	3	..	3	..	..	28	..	23	..	2	347	..	349	4
120. Acute Yellow Atrophy of the Liver	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
121. Hydatid of the Liver	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	4	1
122. Cirrhosis of the Liver—																				
(*a*) Alcoholic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	4	..
(*b*) Other forms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	50	15	51	2
123. Biliary Calculus	..	1	..	1	..	..	..	..	..	..	..	2	..	2	..	..	1	..	1	..
124. Other affections of the Liver—	..	1	..	1	..	..	7	..	7	..	..	..	..	..	..	..	1	1	1	..
Abscess	..	..	..	..	..	..	6	..	6	..	..	..	..	..	..	1	25	7	26	2
Hepatitis	..	9	..	9	1	..	1	..	1	..	..	2	..	2	..	8	94	6	102	7
Cholecystitis	..	..	..	..	..	1	6	1	7	..	..	1	..	1	..	..	14	2	14	..
Jaundice	..	1	..	1	..	..	1	..	1	..	..	1	..	1	..	2	29	4	31	..
125. Diseases of the Pancreas ..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..
Pneumocccal Peritonitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
126. Peritonitis (of unknown cause) ..	..	..	..	..	..	..	3	..	3	..	..	..	..	..	..	2	19	17	21	2
127. Other affections of the Digestive System	..	2	..	2	..	..	4	2	4	..	..	6	..	6	..	2	57	9	59	..
VII.—Diseases of the Genito-urinary System (Non-venereal).																				
128. Acute Nephritis	..	..	..	..	..	1	3	..	4	..	..	..	..	..	..	2	54	14	56	1
129. Chronic Nephritis	..	..	..	..	..	..	7	..	7	..	..	..	..	..	..	3	58	22	61	1
Uraemia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	3	..
130. *A.*—Chyluria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
B.—Schistosomiasis	..	2	..	2	1	..	5	..	5	..	..	..	..	..	..	11	226	3	237	8
Haematuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
131. Other affections of the Kidneys—	..	3	..	3	..	..	7	..	7	..	..	..	..	..	..	2	16	2	18	2
Pyelitis	..	2	..	2	..	..	7	..	7	..	..	1	..	1	..	..	7	2	7	..
Uræmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Urinary Fistula	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
132. Urinary Calculus	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	6	..	6	..
133. Diseases of the Bladder— ..	..	..	..	..	..	..	1	..	1	..	..	4	..	4	..	..	..	..	..	..
Cystitis	..	4	..	4	..	..	8	..	8	..	..	..	..	..	..	2	52	7	54	..
Diseases of the Blader-Rupture	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
VII.—Diseases of the Genito-urinary System (Non-venereal) —(*Contd.*)																				
134. Diseases of the Urethra—																				
(*a*) Stricture	..	..	..	..	..	..	5	..	5	..	..	3	..	3	..	..	32	1	32	..
(*b*) Other	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	1	24	..	25	1
135. Diseases of the Prostate—																				
Hypertrophy	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	5	..	5	..
Prostatitis	..	1	..	1	..	1	2	..	3	..	..	..	..	..	..	..	7	.1	7	..
136. Diseases (Non-venereal) of the Genital Organs of Man ..	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	3	39	..	42	1
Epididymitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	22	..	23	1
Orchitis	..	2	..	2	..	..	1	..	1	..	..	2	..	2	..	1	71	..	72	..
Hydrocele	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	6	84	..	90	4
Ulcer of Penis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	26	..	29	1
Phymosis	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	137	..	137	1
137. Cysts or other Non-malignant Tumours of the Ovaries ..	..	..	..	..	..	..	6	..	6	..	..	..	..	..	..	1	29	2	30	2
138. Salpingitis—	..	..	..	..	..	..	4	..	4	..	..	..	..	..	..	1	72	..	73	..
Abscess of the Pelvis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	..	12	..
139. Uterine Tumours (Non-malignant)	..	1	..	1	..	..	4	..	4	..	..	..	..	..	..	1	23	1	24	..
140. Uterine Hæmorrhage (Non-puerperal)	..	1	..	1	..	..	3	..	3	..	..	..	..	..	..	..	11	..	11	..
141. *A.*—Metritis	..	..	..	..	..	1	7	..	8	..	..	..	..	..	..	2	42	..	44	1
B.—Other affections of the Female Genital Organs	..	1	..	1	..	..	11	..	11	1	..	..	..	..	..	4	69	1	73	3
Displacement of Uterus ..	..	..	..	..	..	..	8	..	8	1	..	..	..	..	..	3	13	..	16	..
Amenorrhœa	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	16	..	16	..
Leucorrhœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	8	..
Dysmenorrhœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	13	..	14	..
142. Diseases of the Breast (Non-puerperal)—	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	..	2	..
Mastitis	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	2	43	1	45	1
Abscess of Breast	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	1	15	2	16	..
Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pyosalpinx	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	5	1

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
VIII.—Puerperal State.																				
143. *A.*—Normal Labour	..	..	..	..	..	..	8	..	8	..	..	..	..	..	..	10	580	3	590	35
B.—Accidents of Pregnancy—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Abortion	..	..	..	..	..	..	13	..	13	..	..	..	..	..	..	2	134	1	136	2
(*b*) Ectopic Gestation	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	6	1	6	..
(*c*) Other accidents of Pregnancy	..	..	..	..	..	..	12	..	12	..	..	..	..	..	..	7	200	10	207	8
144. Puerperal Hæmorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	2	..
145. Other accidents of Parturition	..	..	..	..	..	..	6	..	6	..	..	..	..	..	..	2	59	16	61	1
146. Puerperal Septicæmia	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	39	12	39	..
147. Phlegmasia Dolens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
148. Puerperal Eclampsia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	..
149. Sequelæ of Labour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	35	1	35	2
150. Puerperal affections of the Breast	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Caesarian Section	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	9	1
IX.—Affections of the Skin and Cellular Tissues.																				
151. Gangrene	..	..	..	..	..	..	2	..	2	..	..	1	..	1	..	2	30	7	32	..
152. Boil	..	6	..	6	..	..	6	..	6	..	..	23	..	23	..	1	59	..	60	1
Carbuncle	..	3	..	3	..	..	1	..	1	..	..	3	..	3	..	..	12	..	12	1
153. Abscess	..	14	..	14	..	..	22	..	22	2	..	14	..	14	..	43	790	15	833	36
Whitlow	..	2	..	2	..	..	1	..	1	..	..	2	..	2	..	1	48	..	49	3
Cellulitis	..	4	..	4	..	..	11	..	11	..	..	9	..	9	..	12	341	10	353	8
154. *A.*—Tinea	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	15	..	15	..
B.—Scabies	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	5	145	..	150	5
Cancrum Oris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155. Other Diseases of the Skin—	..	6	..	6	..	..	8	..	8	1	1	3	..	4	..	15	154	2	169	5
Erythema	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	7	..	7	3
Urticaria	..	2	..	2	..	..	2	..	2	..	..	9	..	9	..	..	13	..	13	..
Eczema	..	..	..	..	..	..	1	..	1	..	..	15	..	15	..	3	63	..	66	4
Herpes	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..	..	19	..	19	..
Dermatitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Impetigo	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	11	..	11	..
Psoriasis	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	3	..	4	..
Elephantiasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	57	..	62	5
Myiasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
Chigoes	..	1	..	1	..	..	2	..	2	..	..	2	..	2	..	4	77	..	81	8
Cutaneous Leishmaniasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ulcers	..	3	..	3	..	..	4	..	4	1	..	..	..	..	..	297	3,583	27	3,880	333

DISEASES	European Officials					European General Population (Non-Official)					Non European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
X.—Diseases of Bones and Organs of Locomotion (other than Tuberculous).																				
156. Diseases of Bones—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	72	..	72	..
Osteitis	..	1	..	1	..	..	4	..	4	..	..	12	..	12	..	8	97	1	105	8
157. Diseases of Joints—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6	..
Arthritis	..	..	..	..	..	..	4	..	4	..	..	4	..	4	..	10	155	3	165	14
Synovitis	..	3	..	3	..	..	..	..	..	..	..	6	..	6	1	6	148	1	154	9
158. Other Diseases of Bones or Organs of Locomotion	..	13	..	13	..	1	14	..	15	..	..	6	..	6	..	50	417	11	467	28
Myalgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XI.—Malformations.																				
159. Malformations	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	28	2	28	..
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	6	..
Hypospadias	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Spina Bifida	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	5	..
XII.—Diseases of Infancy.																				
160. Congenital Debility	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..	..	15	1	15	3
161. Premature Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	15	18	..
162. Other affections of Infancy	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	5	19	3	24	..
Inanition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
163. Infant neglect (infants of three months or over)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
XIII.—Affections of Old Age.																				
164. Senility—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29	16	29	1
Senile Dementia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	..	7	..

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
XIV.—Affections produced by External Causes.																				
165. Suicide by Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
166. Corrosive Poisoning (intentional)	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..
167. Suicide by Gas Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
168. Suicide by Hanging or Strangulation (attempted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
169. Suicide by Drowning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
170. Suicide by Firearms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
171. Suicide by Cutting or Stabbing Instruments (attempted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..
172. Suicide by jumping from a height	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
173. Suicide by Crushing	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
174. Other Suicides	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
175. Food Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	34	3	34	
Botulism	..	2	..	2	..	..	2	..	2	..	..	..	..	..	..	..	2	1	2	..
176. Attacks of Poisonous Animals	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	2	7	..
Snake Bite	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..	4	81	..	85	3
Insect Bite	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	32	..	32	..
177. Other Accidental Poisonings	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	15	1	15	1
178. Burns (by Fire)	..	4	..	4	..	..	2	..	2	..	..	..	..	..	..	32	361	66	393	23
179. Burns (other than by Fire)	..	..	..	..	..	..	3	..	3	..	..	6	..	6	..	6	109	16	115	8
180. Suffocation (Accidental)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
181. Poisoning by Gas (Accidental)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
182 Drowning (Accidental)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
183. Wounds (by Firearms, War excepted)	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	29	4	30	..
184. Wounds (by Cutting or Stabbing Instruments)	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	31	615	18	646	30
185. Wounds (by Fall)	..	1	..	1	..	..	3	..	3	..	..	10	..	10	..	8	121	..	129	11
186. Wounds (in Mines or Quarries)	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	9	..	11	..

DISEASES	European Officials					European General Population (Non-Official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
XIV.—Affections produced by External Causes—(*Contd.*)																				
187. Wounds (by Machinery)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	79	3	83	9
188. Wounds (Crushing, *e.g.*, Railway Accidents, etc.)	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	2	46	2	48	1
189. Injuries inflicted by Animals, Bites, Kicks, etc.	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	5	171	8	176	7
190. Wounds inflicted on Active Service	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
191. Executions of Civilians by Belligerents (wounds)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
192. *A.*—Over Fatigue	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
B.—Hunger or Thirst	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	..
193. Exposure to Cold, Frostbite, etc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
194. Exposure to Heat	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Heatstroke	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Sunstroke	..	3	..	3	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
195. Lightning Stroke	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	3	..
196. Electric Shock	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
197. Murder by Firearms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
198. Murder by Cutting or Stabbing Instruments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
199. Murder by other means	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
200. Infanticide (Murder of an Infant under one year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
201. *A.*—Dislocation	1	1	..	2	..	..	5	..	5	..	..	2	..	2	..	1	59	..	60	5
B.—Sprain	..	9	..	9	..	..	2	..	2	..	..	8	..	8	..	1	110	..	111	..
C.—Fracture	..	7	..	7	..	1	24	2	25	..	..	2	..	2	..	45	595	42	640	56
202. Other External Injuries	1	41	..	42	..	..	34	3	34	1	..	122	..	122	4	102	2 234	17	2 336	121
203. Deaths by Violence of unknown cause	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Internal Injuries	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..

DISEASES	European Officials					European General Population (Non-official)					Non-European Officials (including Asiatics)					Native General Population (including Asiatics)				
	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year	Cases remaining in Hospital from previous year	Total Admission	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year
XV.—Ill. Defined Diseases.																				
204. Sudden Death (cause unknown)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
205. *A.*—Diseases not already specified or ill-defined	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	6	..
Ascites	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	35	2	37	..
Oedema	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	29	2	31	..
Asthenia	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2	46	5	48	5
Hyperpyrexia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6	..
P.U.O.	..	..	..	20	..	20	..	..	4	..	4	..	1	174	..	175	5	3	169	9	172	3
Vertigo	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Starvation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	5	..
Debility	..	..	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	2	20	2	22	1
N.Y.D.	..	..	..	1	..	1	..	..	6	..	6	..	..	..	..	..	..	2	16	..	18	1
Haematuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4	1
Madura Foot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	..
Marasmus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	8	15	..
Febricula	..	..	..	2	..	2	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Stiff Neck	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	.
Vaccine Reaction	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shock	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	5	10	..
B.—Malingering	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	7	..
XVI.—Diseases, the Total of which have not Caused 10 Deaths.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21	2	21	..
GRAND TOTAL	..	9	729	1	730	7	18	1,075	42	1,093	29	12	1,879	2	1,891	17	1,831	39,700	2,223	41,531	1,875
Surgical Operations—																				
Under General Anæsthesia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Others	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE VI.

COLONY AND PROTECTORATE OF KENYA.

RETURN OF DISEASES (Out-Patients).

NUMBERS TREATED DURING THE YEAR 1935.

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
I.—Epidemic, Endemic and Infectious Diseases.												
1. Enteric Group—												
(*a*) Typhoid Fever	1	..	1	..	1	1	..	..	..	22	1	23
(*b*) Paratyphoid A.	..	..	..	..	1	1	..	..	..	..	..	..
(*c*) Paratyphoid B.	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Type not defined	..	..	..	..	..	..	..	..	..	..	1	1
T.A.B. Reaction	..	..	..	..	..	..	..	..	..	..	..	..
2. Typhus	..	..	..	..	..	..	..	..	..	..	..	..
3. Relapsing Fever	..	..	..	..	..	..	..	..	..	28	24	52
4. Undulant Fever	..	..	..	..	..	..	..	..	..	..	..	..
5. Malaria—												
Clinical	24	1	25	33	12	45	101	..	101	14,235	3,783	18,018
(*a*) Tertian	6	2	8	2	..	2	27	..	27	235	115	350
(*b*) Quartan	..	2	2	1	6	7	5	..	5	398	136	534
(*c*) Aestivo-autumnal	25	5	30	34	31	65	43	..	43	4,570	1,310	5,880
Cerebral	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Undifferentiated	..	..	..	1	4	5	84	..	84	1,683	272	1,955
(*e*) Cachexia	2	..	2	6	..	6	1	..	1	204	64	268
(*f*) Blackwater	..	..	..	3	..	3	..	..	..	4	1	5
Vaccinia	..	..	..	..	1	1	..	..	..	12	1	13
6. Smallpox	..	..	..	..	..	..	..	..	..	..	..	..
Alastrim	..	..	..	..	..	..	..	..	..	..	..	..
7. Measles	4	..	4	1	1	2	2	..	2	237	82	319
8. Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..
9. Whooping Cough	..	..	..	2	..	2	1	..	1	336	469	805
10. Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..
11. Influenza	117	53	170	13	14	27	722	..	722	9,235	1,202	10,437
12. Miliary Fever	..	..	..	..	..	..	..	..	..	..	..	..
13. Mumps	19	..	19	..	..	..	3	..	3	206	45	251
14. Cholera	..	..	..	..	..	..	..	..	..	..	..	..
15. Epidemic Diarrhœa	..	..	..	..	..	..	..	..	..	118	118	236
16. Dysentery	..	..	..	..	..	..	..	..	..	4	3	7
(*a*) Amœbic	4	6	20	18	15	33	18	..	18	305	176	481
(*b*) Bacillary	1	1	2	3	3	6	1	..	1	31	27	58
(*c*) Undefined or due to other causes	3	1	4	2	1	3	..	..	..	493	150	643

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
I.—Epidemic, Endemic and Infectious Diseases—(*Contd.*)												
17. Plague—												
(*a*) Bubonic	..	..	..	..	..	..	..	..	..	2	3	5
(*b*) Pneumonic	..	..	..	..	..	..	..	..	..	..	..	..
(*c*) Septicæmic	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Undefined	..	..	..	..	..	..	..	..	..	..	..	..
18. Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..
19. Spirochætosis ictero-hæmorrhagica	..	..	..	..	..	..	..	..	..	..	..	..
20. Leprosy	..	..	..	..	..	..	..	..	..	201	40	241
21. Erysipelas	..	..	..	..	..	..	..	..	..	1	..	1
22. Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	..	1	1
23. Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..
24. Epidemic Cerebro-spinal Fever	..	..	..	..	..	..	..	..	..	..	..	..
25. Other Epidemic Diseases—												
(*a*) Rubeola (German Measles)	..	..	..	..	..	..	1	..	1	3	5	8
(*b*) Varicella (Chicken-pox)	2	..	2	1	3	4	..	..	..	485	71	556
(*c*) Kala-azar	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Phlebotomus Fever	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Dengue	..	..	..	..	..	..	..	..	..	..	..	..
(*f*) Epidemic Dropsy	..	..	..	..	..	..	..	..	..	..	..	..
(*g*) Yaws	..	..	..	..	..	..	..	..	..	6,258	4,574	10,832
(*h*) Trypanosomiasis	..	..	..	1	..	1	..	..	..	..	..	..
Febricula	12	..	12	2	9	11	..	..	..	..	..	..
26. Glanders	..	..	..	..	..	..	..	..	..	..	..	..
27. Anthrax	..	..	..	1	..	1	..	..	..	52	28	80
28. Rabies	..	..	..	..	..	..	..	..	..	5	..	5
29. Tetanus	..	..	..	..	..	..	..	..	..	5	..	5
30. Mycosis	..	..	..	..	..	..	..	..	..	6	8	14
31. Tuberculosis, Pulmonary and Laryngeal	..	..	..	1	..	1	..	..	..	161	55	216
32. Tuberculosis of the Meninges or Central Nervous System	..	..	..	..	..	..	..	..	..	..	..	..
33. Tuberculosis of the Intestines or Peritoneum	..	..	..	..	..	..	..	..	..	1	4	5
34. Tuberculosis of the Vertebral Column	..	..	..	..	..	..	..	..	..	1	3	4
35. Tuberculosis of Bones and Joints	..	..	..	..	..	..	..	..	..	27	36	63

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
I.—Epidemic, Endemic and Infectious Diseases—(*Contd.*)												
36. Tuberculosis of other Organs—												
(*a*) Skin or Subcutaneous Tissue (Lupus)	..	..	..	..	..	..	..	..	..	2	..	2
(*b*) Bones	..	..	..	..	..	..	..	..	..	1	..	1
(*c*) Lymphatic System	..	..	..	..	..	..	..	..	..	75	32	107
(*d*) Genito-urinary	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Other Organs	..	..	..	..	..	..	..	..	..	3	..	3
37. Tuberculosis disseminated—												
(*a*) Acute	..	..	..	..	..	..	..	..	..	4	..	4
(*b*) Chronic	..	..	..	..	..	..	..	..	..	..	..	..
38. Syphilis	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Primary	..	..	..	..	..	..	..	..	..	1,136	704	1,840
(*b*) Secondary	..	..	..	..	..	..	..	..	..	704	472	1,176
(*c*) Tertiary	..	..	..	1	..	1	..	..	..	361	286	647
(*d*) Hereditary	..	..	..	..	..	..	..	..	..	68	161	229
(*e*) Period not indicated	..	..	..	..	..	..	1	..	1	1,341	880	2,221
Condyloma	..	..	..	..	..	..	..	..	..	..	..	..
39. Soft Chancre	..	..	..	..	..	..	..	..	..	63	4	67
40. *A.*—Gonorrhœa and its complications	..	..	..	4	..	4	3	..	3	2,046	148	2,194
B.—Gonorrhœal Ophthalmia	..	..	..	..	..	..	..	..	..	39	102	141
C.—Gonorrhœal Arthritis	..	..	..	..	..	..	..	..	..	24	..	24
D.—Granuloma Venereum	..	..	..	..	..	..	..	..	..	5	..	5
41. Septicæmia	..	..	..	1	..	1	..	..	..	..	..	..
42. Other Infectious Diseases	..	..	..	..	..	..	..	..	..	..	..	..
Trypanosomiasis	..	..	..	..	..	..	..	..	..	..	..	..
II.—General Diseases not mentioned above.												
43. Cancer or other Malignant Tumours of the Buccal Cavity	..	..	..	..	..	..	..	..	..	..	1	1
44. Cancer or other Malignant Tumours of the Stomach or Liver	..	..	..	..	..	..	..	..	..	1	..	1
45. Cancer or other Malignant Tumours of the Peritoneum Intestines, Rectum	..	..	..	..	..	..	..	..	..	..	..	..

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
II.—General Diseases not mentioned above—(*Contd.*)												
46. Cancer or other Malignant Tumours of the Female Genital Organs	..	..	..	..	..	..	..	..	..	..	..	..
47. Cancer or other Malignant Tumours of the Breast	..	..	..	..	..	..	..	..	..	..	..	..
48. Cancer or other Malignant Tumours of the Skin	..	..	..	..	..	..	..	..	..	..	..	..
49. Cancer or other Malignant Tumours of Organs not specified	..	..	..	..	1	1	..	..	..	3	..	3
50. Tumours, Non-malignant	9	..	9	6	2	8	..	..	..	133	56	189
51. Acute Rheumatism	1	..	1	5	1	6	8	..	8	1,991	824	2,815
Myalgia	3	..	3	1	2	3	23	..	23	2,405	273	2,678
52. Chronic Rheumatism	18	8	26	6	2	8	74	..	74	4,724	2,361	7,085
53. Scurvy (including Barlow's Disease)	..	..	..	..	..	..	..	..	..	3	..	3
54. Pellagra	..	..	..	..	..	..	..	..	..	..	..	..
55. Beri-beri	..	..	..	..	..	..	..	..	..	..	..	..
56. Rickets	..	..	..	2	..	2	..	..	..	1	..	1
57. Diabetes (not including Insipidus) Insipidus	..	..	..	2	..	2	..	..	..	3	3	6
58. Anæmia—	..	..	..	..	..	..	1	..	1	..	..	..
(*a*) Pernicious	..	..	..	..	1	1	..	..	..	..	3	3
(*b*) Other Anæmias and Chlorosis	4	4	8	4	8	12	16	..	16	528	376	904
59. Diseases of the Pituitary Body	..	..	..	..	..	..	..	..	..	..	..	..
60. Diseases of the Thyroid Gland—	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Exophthalmic Goitre	..	..	..	..	..	..	..	..	..	1	1	2
(*b*) Other Diseases of the Thyroid Gland, Myxœdema	..	..	..	..	..	..	..	..	..	9	7	16
61. Diseases of the Para-thyroid Glands	..	..	..	..	..	..	..	..	..	..	..	..
62. Diseases of the Thymus	..	..	..	..	..	..	..	..	..	..	..	..
63. Diseases of the Supra-renal Glands	..	..	..	..	..	..	..	..	..	..	1	1
64. Diseases of the Spleen	..	..	..	..	..	..	6	..	6	447	97	544
65. Leukæmia—												
(*a*) Leukæmia	..	..	..	..	1	1	..	..	..	..	..	..
(*b*) Hodgkin's Disease	..	..	..	..	..	..	..	..	..	1	..	1
66. Alcoholism	..	..	..	..	..	..	..	..	..	1	..	1

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
II.—General Diseases not mentioned above—(*Contd.*)												
66. Alcoholism	..	..	..	..	..	..	..	..	..	..	..	..
67. Chronic poisoning by mineral substances (Lead, Mercury, etc.)	..	..	..	..	..	..	..	..	..	1	..	1
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)	..	..	..	..	..	..	..	..	..	..	..	..
69. Other General Diseases—												
Auto-intoxication	..	..	..	..	1	1	..	..	..	..	..	..
Purpura Hæmorrhagica	..	..	..	..	..	..	..	..	..	..	..	..
Hæmophilia	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes Insipidus	..	..	..	..	..	..	..	..	..	..	..	..
III.—Affections of the Nervous System and Organs of the Senses.												
70. Encephalitis (not including Encephalitis Lethargica)	..	..	..	..	..	..	..	..	..	..	..	..
71. Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	..	..	..	..	..	..	..	..	..	..	..	..
72. Locomotor Ataxia	..	..	..	..	..	..	..	..	..	..	..	..
73. Other affections of the Spinal Cord	..	..	..	..	..	..	..	..	..	..	..	..
74. Apoplexy—										..	..	..
(*a*) Hæmorrhage	..	..	..	..	..	..	..	..	..		..	..
(*b*) Embolism	..	..	..	..	..	..	..	..	..	..	..	..
(*c*) Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..
75. Paralysis—	..	..	..	..	..	..	..	..	..	5	..	5
(*a*) Hemiplegia	..	..	..	..	..	..	..	..	..	7	7	14
(*b*) Other Paralyses	..	..	..	..	..	..	..	..	..	21	10	31
76. General Paralysis of the Insane	..	..	..	..	..	..	..	..	..	..	..	..
77. Other forms of Mental Alienation	..	..	..	1	2	3	1	..	1	34	3	37
78. Epilepsy	1	..	1	..	..	..	2	..	2	62	23	85
79. Eclampsia Convulsions (non-puerperal) 5 years or over	..	..	..	..	..	..	..	..	..	1	..	1
Concussion of the Brain	..	..	..	..	..	..	..	..	..	..	..	..
Sciatica	..	..	..	..	..	..	..	..	..	13	2	15
80. Infantile Convulsions	..	..	..	..	..	..	..	..	..	..	1	1
81. Chorea	..	..	..	..	..	..	..	..	..	2	1	3

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
III.—Affections of the Nervous System and Organs of the Senses.—(*Contd.*)												
82. *A.*—Hysteria	..	..	..	..	5	5	16	..	16	2	15	17
Neuralgia	3	..	3	1	3	4	6	..	6	1,596	534	2,130
B.—Neuritis	4	4	8	..	4	4	8	..	8	288	173	461
C.—Neurasthenia	6	2	8		3	3	3	..	3	6	4	10
Insomnia	..	..	..	..	..	..	..	..	..	..	..	..
Headache	1	1	2	1	1	2	..	..	..	859	147	1,006
83. Cerebral Softening	..	..	..	..	..	..	..	..	..	..	..	..
Concussion	..	..	..	..	..	..	..	..	..	..	..	..
84. Other affections of the Nervous System, such as Paralysis Agitans	6	..	6	..	8	8	..	..	..	27	8	35
85. Affections of the Organs of Vision	..	..	..	..	..	..	..	..	..	1	..	1
(*a*) Conjunctivitis	..	..	..	8	6	14	111	..	111	7,489	5,216	12,705
(*b*) Trachoma	..	1	1	..	..	..	8	..	8	195	96	291
(*c*) Tumours of the Eye	..	..	..	..	..	..	..	..	..	93	50	143
(*d*) Other affections of the Eye	33	9	42	10	3	13	44	..	44	1,031	482	1,513
Xeropthalmia	..	..	..	..	..	..	..	..	..	..	..	..
86. Affections of the Ear or Mastoid Sinus	36	2	38	13	21	34	46	..	46	3,972	1,586	5,558
IV.—Affections of the Circulatory System.												
87. Pericarditis	..	..	..	..	..	..	..	..	..	1	..	1
88. Acute Endocarditis or Myocarditis	..	..	..	..	..	..	..	..	..	..	2	2
89. Angina Pectoris	..	..	..	1	..	1	..	..	..	..	..	..
90. Other Diseases of the Heart—	1	1	2	1	5	6	..	..	..	7	..	7
(*a*) Valvular—	..	..	..	..	..	..	..	..	..	101	9	110
Mitral	7	5	12	..	3	3	5	..	5	29	17	46
Aortic	..	..	..	..	..	..	..	..	..	11	..	11
Tricuspid	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary	..	..	..	..	1	1	..	..	..	..	..	..
(*b*) Myocarditis	1	2	3	1	..	1	4	..	4	6	6	12
91. Diseases of the Arteries—	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Aneurism	..	..	..	..	..	..	..	..	..	1	..	1
(*b*) Arterio-sclerosis	..	..	..	..	..	..	..	..	..	1	..	1
(*c*) Other Diseases	..	..	..	..	..	..	..	..	..	..	..	..
92. Embolism or Thrombosis (non-cerebral)	..	..	..	..	..	..	..	..	..	..	..	..

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
IV.—Affections of the Circulatory System—(*Contd.*)												
93. Diseases of the Veins—	..	..	..	..	..	..	..	..	..	..	..	..
Hæmorrhoids	6	8	14	4	4	8	18	..	18	47	15	62
Varicose Veins	1	..	1	3	1	4	..	..	..	7	1	8
Phlebitis	..	..	..	..	..	..	..	..	..	1	..	1
94. Diseases of the Lymphatic System—	..	..	..	..	..	..	..	..	..	7	3	10
Adenitis	..	..	..	..	..	..	..	..	..	5	1	6
Lymphangitis	..	..	..	3	..	3	..	..	..	76	29	105
Lymphadenitis, Bubo (non-specific)	4	..	4	3	..	3	1	..	1	481	137	618
95. Hæmorrhage of undetermined cause	..	..	..	..	..	..	..	..	..	2	..	2
96. Other affections of the Circulatory System	1	..	1	1	3	4	..	..	..	6	..	6
V.—Affections of the Respiratory System.												
97. Diseases of the Nasal Passages—	..	..	..	..	..	..	..	..	..	..	..	..
Adenoids	2	..	2	..	4	4	..	..	..	5	1	6
Polypus	1	..	1	..	..	..	..	..	..	6	2	8
Dysphagia	..	..	..	..	..	..	..	..	..	..	..	..
Rhinitis	5	..	5	2	1	3	9	..	9	51	7	58
Coryza	53	25	78	4	11	15	184	..	184	5,221	1,845	7,066
98. Affections of the Larynx—	..	..	..	..	1	1	1	..	1	..	..	..
Laryngitis	6	..	6	1	1	2	..	..	..	334	281	615
99. Bronchitis—	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Acute	5	..	5	19	16	35	49	..	49	21,907	7,220	29,127
(*b*) Chronic	108	46	154	2	2	4	464	..	464	3,727	1,874	5,601
100. Broncho-pneumonia	..	..	..	..	..	..	..	..	..	122	55	177
101. Pneumonia—	..	..	..	..	..	..	..	..	..	7	..	7
(*a*) Lobar	..	..	..	2	..	2	..	..	..	40	25	65
(*b*) Unclassified	1	..	1	..	..	..	4	..	4	324	122	446
102. Pleurisy, Empyema	1	..	1	3	..	3	1	..	1	49	11	60
103. Congestion of the Lungs	..	..	..	2	..	2	..	..	..	7	1	8
104. Gangrene of the Lungs	..	..	..	..	..	..	..	..	..	..	..	..
105. Asthma	10	..	10	..	4	4	37	..	37	395	138	533
106. Pulmonary Emphysema	..	..	..	1	..	1	..	..	..	1	..	1
107. Other affections of the Lungs	8	1	9	1	21	22	..	..	..	1,006	714	1,720
Pulmonary Spirochætosis	..	..	..	..	..	..	..	..	..	..	..	..
Pleurodynia	..	..	..	..	..	..	..	..	..	..	..	..

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
VI.—Diseases of the Digestive System.												
108. *A.*—Diseases of Teeth or Gums—	1	..	1	10	9	19	21	..	21	129	30	159
Caries	16	..	16	12	11	23	27	..	27	6,789	2,453	9,242
Pyorrhœa, etc.	2	1	3	..	..	..	5	..	5	254	146	400
B.—Other affections of the Mouth	1	1	2	..	2	2	1	..	1	19	4	23
Stomatitis	2	1	3	2	1	3	40	..	40	450	207	657
Glossitis, etc.	..	..	..	..	..	..	..	..	..	17	13	30
109. Affections of the Pharynx or Tonsils	1	..	1	7	1	8	..	..	..	3	.	3
Tonsillitis	30	15	45	7	18	25	62	..	62	1,494	751	2,245
Pharyngitis	14	..	14	3	7	10	64	..	64	1,745	239	1,984
110. Affections of the Œsophagus ..	..	..	..	1	..	1	..	..	..	1	..	1
111. *A.*—Ulcer of the Stomach ..	..	..	..	..	..	..	..	..	..	7	..	7
B.—Ulcer of the Duodenum ..	..	..	..	..	1	1	..	..	..	..	..	..
112. Other affections of the Stomach..	..	..	..	..	1	1	..	..	..	1	..	1
Gastritis	37	20	57	6	3	9	23	..	23	496	354	850
Dyspepsia	66	14	80	16	19	35	67	..	67	2,514	1,437	3,951
Gastro Enteritis	..	..	..	..	..	..	..	..	..	1	..	1
113. Diarrhœa and Enteritis—	..	..	..	..	..	..	..	..	..	7	16	23
Under two years	..	..	..	3	1	4	..	..	..	729	790	1,519
114. Diarrhœa and Enteritis—												
Two years and over	26	4	30	6	23	29	109	..	109	2,372	943	3,315
Colitis	3	..	3	2	5	7	13	..	13	297	58	355
Ulceration	..	..	..	..	1	1	..	..	..	..	..	..
Colic	1	..	1	1	3	4	3	..	3	88	35	123
114A. Sprue	..	..	..	..	..	..	..	..	..	..	..	..
115. Ankylostomiasis	5	..	5	..	3	3	10	..	10	820	265	1,085
116. Diseases due to Intestinal Parasites—	..	..	..	..	..	..	..	..	..	..	..	..
(*a*) Cestoda (Tænia)	7	3	10	7	1	8	6	.	6	28,498	4,699	33,197
(*b*) Trematoda (Flukes) ..	..	..	..	..	..	..	..	..	..	1	..	1
(*c*) Nematoda (other than — Ankylostoma)	..	..	..	..	..	..	..	..	..	..	..	..
Ascaris	2	2	4	2	..	2	4	..	4	3,403	3,475	6,878
Trichocephalus dispar. ..	..	..	..	1	..	1	..	..	..	62	15	77
Trichina	..	..	..	..	..	..	..	..	..	35	5	40
Dracunculus..	..	..	..	..	..	..	..	..	..	1	3	4
Strongylus	..	..	..	..	1	1	..	..	..	32	5	37
Oxyuris	..	..	..	..	2	2	..	..	..	26	48	74
(*d*) Coccidia	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Other Parasites	..	..	..	..	1	1	..	..	..	424	147	571
(*f*) Unclassified	..	..	..	..	..	..	..	..	..	1,307	476	1,783

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
VI.—Diseases of the Digestive System—(*Contd.*)												
117. Appendicitis	2	..	2	10	6	16	2	..	2	10	2	12
118. Hernia	..	..	..	3	..	3	1	..	1	211	6	217
119. *A.*—Affections of the Anus	..	..	..	..	..	..	..	..	..	5	3	8
Fistula, etc.	2	..	2	..	1	1	1	..	1	10	2	12
B.—Other affections of the Intestines—	..	..	..	1	2	3	..	..	..	6	4	10
Enteroptosis	..	..	..	..	..	..	..	..	..	..	..	..
Constipation	73	18	91	5	4	9	189	..	189	11,212	5,751	16,963
120. Acute Yellow Atrophy of the Liver	..	..	..	..	..	..	..	..	..	..	..	..
121. Hydatid of the Liver	..	..	..	..	..	..	..	..	..	..	..	..
122. Cirrhosis of the Liver—	..	..	..	1	..	1	..	..	..	1	..	1
(*a*) Alcoholic	..	..	..	..	..	..	..	..	..	..	..	..
(*b*) Other forms	..	..	..	..	..	..	..	..	..	4	1	5
123. Biliary Calculus	..	..	..	..	..	..	..	..	..	..	..	..
124. Other affections of the Liver—	..	..	..	..	..	..	..	..	..	1	..	1
Abscess	1	..	1	..	..	..	..	..	..	3	..	3
Hepatitis	10	..	10	1	..	1	3	..	3	132	58	190
Cholecystitis	..	..	..	..	..	..	..	..	..	..	..	..
Jaundice	2	..	2	..	..	..	..	..	..	21	2	23
125. Diseases of the Pancreas	..	..	..	..	..	..	..	..	..	..	..	..
126. Peritonitis (of unknown cause)	..	..	..	1	1	2	..	..	..	..	..	..
127. Other affections of the Digestive System	3	..	3	..	1	1	..	..	..	386	18	404
VII.—Diseases of the Genito-urinary System (Non-venereal).												
128. Acute Nephritis	..	..	..	..	..	..	..	..	..	15	15	30
129. Chronic Nephritis	2	..	2	..	..	..	..	..	..	3	3	6
130. *A.*—Chyluria	..	..	..	..	..	..	..	..	..	1	..	1
B.—Schistisomiasis	2	..	2	1	..	1	..	..	..	302	22	324
131. Other affections of the Kidneys—	..	..	..	3	..	3	..	..	..	2	2	4
Pyelitis	1	..	1	1	1	2	..	..	..	5	..	5
132. Urinary Calculus	..	..	..	1	2	3	..	..	..	1	..	1
133. Diseases of the Bladder—	..	..	..	1	..	1	..	..	..	1	..	1
Cystitis	5	13	18	18	8	26	23	..	23	77	23	100

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
VII.—Diseases of the Genito-urinary System (Non-venereal) —(*Contd.*)												
134. Diseases of the Urethra—	..	..	..	7	..	7	..	..	..	..	..	..
(*a*) Stricture	..	..	..	1	..	1	..	..	..	54	..	54
(*b*) Other	..	..	..	..	1	1	..	..	..	41	1	42
135. Diseases of the Prostate—												
Hypertrophy	..	..	..	..	..	..	..	..	..	..	..	..
Prostatitis	1	..	1	4	..	4	..	..	..	1	..	1
136. Diseases (Non-venereal) of the Genital Organs of Man—	..	..	..	..	..	..	..	..	..	235	..	235
Phimosis	..	..	..	4	..	4	..	..	..	3	..	3
Epididymitis	1	..	1	6	..	6	..	..	..	20	..	20
Orchitis	3	..	3	1	..	1	..	..	..	290	..	290
Hydrocele	..	..	..	4	..	4	..	..	..	196	..	196
Ulcer of Penis	..	..	..	..	..	..	..	..	..	17	..	17
137. Cysts or other Non-malignant Tumours of the Ovaries	..	..	..	..	1	1	..	..	..	..	25	25
138. Salpingitis—	..	..	..	..	..	..	..	..	..	..	12	12
Abscess of the Pelvis	..	..	..	..	..	..	..	..	..	..	2	2
139. Uterine Tumours (Non-malignant)	..	..	..	..	..	..	..	..	..	..	14	14
140. Uterine Hæmorrhage (Non-puerperal)	..	..	..	..	..	..	..	6	6	..	30	30
141. *A.*—Metritis	..	..	..	..	..	..	..	..	..	..	14	14
B.—Other affections of the Female Genital Organs—	..	..	..	..	31	31	..	..	..	..	30	30
Displacement of Uterus	..	..	..	..	..	..	..	..	..	..	6	6
Amenorrhœa	..	27	27	..	6	6	..	12	12	..	100	100
Dysmennorhœa	..	1	1	..	6	6	..	1	1	..	162	162
Leucorrhoea	..	..	..	..	3	3	..	..	..	..	46	46
142. Diseases of the Breast (Non-puerperal)—	..	..	..	..	1	1	..	..	..	..	1	1
Mastitis	..	..	..	..	..	..	..	..	..	..	117	117
Abscess of Breast	..	..	..	..	..	..	..	..	..	..	27	27
VIII.—Puerperal State.												
143. *A.*—Normal Labour	..	12	12	..	5	5	..	38	38	..	236	236
B.—Accidents of Pregnancy—	..	..	..	..	..	..	..	..	..	..	1	1
(*a*) Abortion	..	..	..	..	1	1	..	5	5	..	96	96
(*b*) Ectopic Gestation	..	..	..	..	..	..	..	..	..	..	..	..
(*c*) Other accidents of Pregnancy	..	..	..	..	64	64	..	..	..	..	19	19

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
VIII.—Puerperal State—(*Contd.*)												
144. Puerperal Hæmorrhage	..	..	..	..	..	..	..	..	..	..	1	1
145. Other accidents of Parturition ..	..	..	..	..	..	..	..	..	..	..	3	3
146. Puerperal Septicæmia	..	..	..	..	..	..	..	..	..	..	3	3
147. Phlegmasia Dolens	..	..	..	..	..	..	..	..	..	..	1	1
148. Puerperal Eclampsia	..	..	..	..	..	..	..	..	..	..	..	..
149. Sequelæ of Labour	..	..	..	..	..	..	..	..	..	..	7	7
150. Puerperal affections of the Breast	..	..	..	..	1	1	..	..	..	..	5	5
IX.—Affections of the Skin and Cellular Tissues.												
151. Gangrene	..	..	..	..	..	..	..	..	..	3	1	4
152. Boil	36	9	45	21	8	29	75	..	75	1,559	312	1,871
Carbuncle	4	.	4	2	1	3	..	..	..	8	2	10
153. Abscess	12	2	14	14	11	25	12	..	12	1,687	415	2,102
Whitlow	1	2	3	4	1	5	6	..	6	304	61	365
Cellulitis	5	1	6	9	2	11	4	..	4	2,216	346	2,562
154. *A.*—Tinea	4	..	4	1	6	7	6	..	6	644	174	818
B.—Scabies	14	..	14	..	..	..	16	..	16	8,577	3,812	12,389
155. Other Diseases of the Skin—	18	..	18	14	13	27	12	..	12	397	105	502
Erythema	1	..	1	..	..	.	..	..	..	40	19	59
Urticaria	30	4	34	3	8	11	19	..	19	365	93	458
Eczema	14	4	18	1	3	4	106	..	106	1,115	433	1,548
Herpes	4	5	9	1	2	3	8	..	8	123	40	163
Psoriasis	2	..	2	..	1	1	5	..	5	30	8	38
Elephantiasis	..	..	..	..	..	..	..	..	..	230	123	353
Myiasis	..	..	..	1	..	1	..	..	..	5	..	5
Chigoes	9	1	10	7	..	7	10	..	10	2,704	1,612	4,316
Cutaneous Leishmaniasis ..	..	..	..	..	..	..	..	..	..	1	..	1
Dermatitis	8	..	8	2	3	5	..	..	..	335	196	531
Ulcers	1	..	1	13	12	25	7	..	7	17,681	5,886	23,567
Impetigo	1	..	1	..	2	2	..	..	..	281	81	362

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
X.—Diseases of Bones and Organs of Locomotion (other than Tuberculous).												
156. Diseases of Bones—	..	..	..	..	..	..	..	..	..	..	..	..
Osteitis	11	12	23	..	1	1	35	..	35	761	16	777
157. Diseases of Joints—	..	..	..	..	..	..	..	..	..	..	..	..
Arthritis	3	..	3	3	3	6	2	..	2	819	103	922
Synovitis	6	3	9	2	1	3	12	..	12	741	199	940
158. Other Diseases of Bones or Organs of Locomotion	8	1	9	3	7	10	8	..	8	3,601	590	4,191
Myalgia	..	..	..	..	..	..	..	..	..	..	..	..
XI.—Malformations.												
159. Malformations—	..	..	..		4	4	..	..	..	4	..	4
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..
Hypospadias	..	..	..	..	..	..	..	..	..	..	1	1
Spina Bifida	..	..	..	..	..	..	..	..	..	1	1	2
XII.—Diseases of Infancy.												
160. Congenital Debility	16	14	30	..	..	..	9	..	9	22	77	99
161. Premature Birth	..	..	..	..	..	..	..	..	..	..	1	1
162. Other affections of Infancy ..	..	..	..	2	1	3	..	..	..	14	14	28
163. Infant neglect (infants of three months or over)	..	..	..	..	..	..	..	..	..	2	3	5
XIII.—Affections of Old Age.												
164. Senility—	..	..	..	..	1	1	..	..	..	2	2	4
Senile Dementia	..	..	..	..	..	..	..	..	..	..	..	..

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
XIV.—Affections produced by External Causes.												
165. Suicide by Poisoning	..	..	..	..	..	..	..	..	..	..	..	.
166. Corrosive Poisoning (intentional)	..	..	..	..	..	..	..	..	..	..	..	..
167. Suicide by Gas Poisoning	..	..	..	..	..	..	..	..	..	..	..	.
168. Suicide by Hanging or Strangulation	..	..	..	..	..	..	..	..	..	1	..	1
159. Suicide by Drowning	..	..	..	..	..	..	..	..	..	..	..	..
170. Suicide by Firearms	..	..	..	..	..	..	..	..	..	..	..	..
171. Suicide by Cutting or Stabbing Instruments	..	..	..	..	..	..	..	..	..	..	..	..
172. Suicide by jumping from a height	..	..	..	..	..	..	..	..	..	..	..	..
173. Suicide by Crushing	..	..	..	..	..	..	..	..	..	..	..	..
174. Other Suicides	..	..	..	..	..	..	..	..	..	..	..	..
175. Food Poisoning—												
Botulism		..	..	1	1	2				1		1
176. Attacks of Poisonous Animals—	..	..	..	..	..	..	..	..	..	..	..	..
Snake Bite	4	1	5	1	..	1	5	..	5	56	17	73
Insect Bite	3	1	4	1	..	1	9	..	9	184	35	219
177. Other Accidental Poisonings	1	..	1	1	..	1	6	..	6	1	..	1
178. Burns (by Fire)	..	..	..	5	2	7	30	..	30	1,124	666	1,790
179. Burns (other than by Fire)	4	2	6	..	..	..	..	..	..	533	202	735
180. Suffocation (Accidental)	..	..	..	..	..	..	..	..	..	6	2	8
181. Poisoning by Gas (Accidental)	..	..	..	..	..	..	..	..	..	..	..	..
182. Drowning (Accidental)	..	..	..	..	..	..	..	..	..	..	..	..
183. Wounds (by Firearms, War excepted)	..	..	..	..	..	..	..	..	..	100	76	176
184. Wounds (by Cutting or Stabbing Instruments)	1	..	1	2	2	4	1	..	1	2,852	425	3,277
185. Wounds (by Fall)	..	..	..	2	3	5	10	..	10	1,829	281	2,110
186. Wounds (in Mines or Quarries)	..	..	..	..	..	..	..	..	..	..	..	..
187. Wounds (by Machinery)	1	..	1	1	..	1	..	..	..	19	2	21
188. Wounds (Crushing, *e.g.*, Railway Accidents, etc.)	..	..	..	..	..	..	..	..	..	33	..	33
189. Injuries inflicted by Animals, Bites, Kicks, etc.	1	..	1	1	..	1	2	..	2	126	16	142

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
XIV.—Affections produced by External Causes—(*Contd.*)												
190. Wounds inflicted on Active Service	..	..	..	..	..	..	..	..	..	..	..	..
191. Executions of Civilians by Belligerents	..	..	..	..	..	..	..	..	..	2	..	2
192. *A.*—Over Fatigue	..	..	..	..	..	..	..	..	..	..	..	..
B.—Hunger or Thirst	..	..	..	..	..	..	..	..	..	..	..	..
193. Exposure to Cold, Frostbite, etc.	..	..	..	..	..	..	..	..	..	..	..	..
194. Exposure to Heat—												
Heatstroke	..	..	..	1	1	2	..	..	..	1	..	1
Sunstroke	4	..	4	..	..	..	..	..	..	..	1	1
195. Lightning Stroke	..	..	..	..	..	..	..	..	..	..	..	..
196. Electric Shock	..	..	..	..	..	..	..	..	..	2	..	2
197. Murder by Firearms	..	..	..	..	..	..	..	..	..	..	..	..
198. Murder by Cutting or Stabbing Instruments	..	..	..	..	..	..	..	..	..	1	..	1
199. Murder by other means	..	..	..	..	..	..	..	..	..	..	..	..
200. Infanticide (Murder of an Infant under one year	..	..	..	..	..	..	..	..	..	..	..	..
201. *A.*—Dislocation	2	..	2	1	..	1	..	..	..	36	3	39
B.—Sprain	17	..	17	9	8	17	9	..	9	1,259	133	1,392
C.—Fracture	3	..	3	3	3	6	3	..	3	328	33	361
202. Other External Injuries	154	17	171	38	23	61	543	..	543	30,531	3,761	34,292
203. Deaths by Violence of unknown cause	..	..	..	..	..	..	..	..	..	..	..	..
XV.—Ill Defined Diseases.												
204. Sudden Death (cause unknown)	..	..	..	..	..	..	..	..	..	..	..	..
205. *A.*—Diseases not already specified or ill-defined—	4	1	5	..	6	6	..	..	..	65	32	97
Ascites	..	..	..	..	..	..	1	..	1	29	..	29
Oedema	..	..	..	..	..	..	..	..	..	96	55	151
Asthenia	2	..	2	..	..	..	5	..	5	100	29	129
Shock	..	..	..	..	1	1	..	..	..	3	..	3
Hyperpyrexia	..	..	..	..	..	..	..	..	..	4	2	6
P.U.O.	110	50	160	6	2	8	329	..	329	8,982	1,257	10,239
Debility	8	..	8	26	18	44	1	..	1	111	31	142
Filariasis	..	..	..	..	..	..	..	..	..	3	..	3
N.Y.D.	..	..	..	..	..	..	..	..	..	..	..	..
Marasmus	..	..	..	..	..	..	..	..	..	1	2	3
Human bite	..	..	..	..	..	..	..	..	..	4	..	4
B.—Malingering	..	..	..	..	..	..	..	..	..	29	..	29

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population (Non-official)			Non-European Officials (including Asiatics)			Native General Population (including Asiatics)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
XVI.—Diseases, the Total of which have not Caused 10 Deaths.	..	..	..	..	..	..	..	..	..	..	..	..
GRAND TOTAL ..	..	..	..	..	..	..	..	..	..	..	..	..
Surgical Operations—												
Under General Anæsthesia ..	..	..	..	..	..	..	..	..	..	..	..	..
Others	1,468	477	1,945	607	676	1,283	4,205	..	2,205	263,394	85,747	349,141

MEDICAL RESEARCH LABORATORY
ANNUAL REPORT, 1935

By

R. P. CORMACK, M.B., CH.B., D.P.H., D.T.M. & H.
Senior Bacteriologist

CONTENTS

ANNUAL REPORT OF THE MEDICAL RESEARCH LABORATORY KENYA COLONY AND PROTECTORATE, FOR 1935

STAFF, 1935.

Senior Baeteriologist.—R. P. Cormack, M.B., Ch.B. (Edin.), D.P.H. (Camb.), D.T.M. & H. (Eng.).

Assistant Baeteriologists.—F. P. G. de Smidt, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Camb.); H. D. Tonking, M.R.C.S. (Eng.), L.R.C.P. (Lond.); F. W. Vint, M.D., B.Ch., B.A.O. (Q.U. Belf.), B.Sc.; R. M. Dowdeswell (seconded from Medical Division on the 27th September, 1935), M.A., B.Ch. (Cantab.), M.R.C.S. (Eng.), L.R.C.P. (Lond.).

Biochemist.—D. Harvey, M.A., B.Sc., Ph.D.

Medieal Entomologists.—C. B. Symes; J. I. Roberts, D.Sc.

Laboratory Superintendent.—F. A. Bailey.

Laboratory Assistants, Senior Grade.—H. M. Nefdt, B.Sc.; W. L. Titman; J. P. McMahon; A. H. Daws; W. A. Doust; E. C. Young.

Laboratory Assistants, Junior Grade.—W. E. Grainger; T. G. R. Jones.

Laboratory Assistants, Non-European.—Ramji Das; Elisha Nyalondo; Gideon Otieno; J. St. A. M. de Souza.

Malaria Field Overseers.—J. O. Harper; C. Teesdale.

Tsetse Field Overseers.—R. T. Vane; R. Southby. Appointed for work under the Colonial Development Fund, Tsetse Control.

Librarian and Stenographer.—Miss I. E. Bowman.

Storekeeper.—Max de Souza.

A.—ADMINISTRATION.

1.—Introduction.

The Report of the Medical Research Laboratory has this year been compiled from a purely sectional point of view, so that under the reports of the various sections will be found the relative information.

2.—Changes in Staff.

Dr. de Smidt was on sick leave from the beginning of July.

Dr. R. M. Dowdeswell took charge of the Section of Bacteriology on the 27th September, 1935.

Mr. W. E. Grainger was posted to Kisumu for anti-malarai work in June in order to take over from Mr. J. O. Harper on his departure on long leave in July.

3.—Leave.

Dr. H. D. Tonking proceeded on leave on the 6th July, 1935.

Mr. W. A. Doust returned from leave on the 15th April, 1935.

Mr. J. O. Harper proceeded on leave on the 6th July, 1935.

Mr. W. L. Titman returned from leave and reported for duty at the Native Hospital Laboratory, Mombasa, on the 10th March, 1935.

Mr. T. G. R. Jones proceeded on leave on the 9th March, and returned to duty on 1st October, 1935.

Mr. Max de Souza proceeded on leave on the 7th November, 1935.

4.—Publications by the Staff.

H. D. Tonking:

"Ankylostomiasis in Digo District." (East African Medical Journal, Vol. XI, No. 5, August, 1935.)

F. W. Vint :

"Malignant Disease in Natives of Kenya." (Lancet 2; 628-630, 14th September, 1935.)

C. B. Symes :

"Outline of Work on *G. palpalis* in Kenya." (East African Medical Journal, Vol. XII, No. 9, December, 1935.)

"Insects in Aeroplanes." (Records of the Medical Research Laboratory, Nairobi, No. 6, 1935.)

J. I. Roberts :

"The Relationship of the Cotton Crop to Plague and its Role as a Vehicle for Rats and Fleas in East Africa." (Journal of Hygiene, Vol. XXXV, No. 3, August, 1935.)

"The Endemicity of Plague in East Africa." (East African Medical Journal, Vol. XI, No. 7, October, 1935.)

"The Ticks of Rodents and their Nests, and the Discovery that *Rhipicephalus sanguineus Ltr.* is the Vector of Tropical Typhus in Kenya." (Journal of Hygiene, Vol. XXXV, N. 4, 4th March, 1935.)

and D. A. Dick :

"Notes on the Control of Bed Bugs." (East African Medical Journal, Vol. XI, No. 2, May, 1935.)

J. P. McMahon :

"Preliminary Notes on the Control of Flies." (East African Medical Journal, Vol. XI, No. 5, August, 1935.)

B.—SECTION OF MEDICAL BIOLOGY.

1.—Staff.

(*a*) *European.*—This Section was in charge of Mr. A. H. Daws until February, when he was transferred to Kisumu. Mr. E. C. Young then took charge.

(*b*) *African.*—The native staff varies from time to time, except for one or two senior boys who help with the training of the juniors.

2.—Specimens.

During the year 27,607 specimens were received and dealt with in this Section. A further 3,102 were examined at the Infectious Diseases Hospital, making a total of 30,709, an increase of 10,266 over the previous year and 14,603 over 1933. Below they are tabulated in their various groups.

(*a*) *Fæces Examinations (Microscopical).*

The number of specimens examined was 13,835, an increase of 6,729 over the previous year and 6,933 over 1933. A large increase will be noted in the number of specimens showing the presence of *E. histolytica*, an increase of 602 over 1934, about 400 per cent. The high European figure is mainly due to the repeating of specimens daily, as many as six from each individual, since it has been found that three, four or five may be negative and the sixth show the presence of *E. histolytica*. It is interesting to note that in 795 cases of *E. histolytica*, *C mesnili* were associated with them 157 times, about 20 per cent of the cases.

Repeated examinations of non-European stools are seldom asked for but if they were carried out the figures for Asians and Africans would be much greater.

The figures for Europeans show a higher percentage of positive findings than might be expected as specimens are sent in from the European Hospital daily after a diagnosis is made, in order to ascertain how the infestation is progressing.

As usual, the table is made out to show the numbers of times the individual organisms were encountered, no account being taken of whether or not several varieties were present in the same specimen.

	Europeans	Asians	Africans	Total
Ova of—				
Taenia	10	3	2,338	2,351
A. lumbricoides	13	10	803	826
A. duodenale	52	24	1,411	1,487
S. stercoralis	14	3	127	144
S. stercoralis (Larvæ of)	6	2	234	242
S. mansoni	39	3	218	260
E. vermicularis	9	2	61	72
T. trichiura	46	19	810	875
H. diminuta	—	—	1	1
H. nana	—	4	19	23
Cysts and other forms of—				
E. coli	121	17	1,687	1,825
E. histolytica	227	14	554	795
I butschlii	28	3	226	257
E. nana	1	—	—	1
G. intestinalis	82	8	162	252
C. mesnili	131	16	261	408
B. coli	1	—	1	2
Flagellate cysts (undifferentiated) ..	196	16	1,127	1,339
Charcot-Leyden crystals (but no cysts)	91	14	127	232
Negative	2,753	209	3,867	6,829

Included in the above are 2,939 specimens examined at the Infectious Diseases Hospital, by a trained boy sent from the Medical Research Laboratory.

(*b*) *Blood Examinations.*

The total number of specimens examined was 16,196, an increase of 3,553 over 1934 and 7,298 over 1933.

The following examinations and findings were carried out :—

	Europeans	Asians	Africans	Total
P. falciparum	224	1,336	2,120	3,680
P. vivax	36	378	118	532
P. malariæ	3	33	64	100
Mixed infcctions	3	36	14	53
P. falciparum (crescents) ..	8	88	193	289
Filaria, shcathed..	—	—	4	4
Filaria, unsheathed	1	1	54	56
S. rossi	—	1	14	15
Differential counts	443	19	18	480
Total counts	82	19	41	142
Arneth counts	15	—	—	15
Negative for malaria	1,487	2,991	6,716	11,194
TOTAL ..	2,302	4,902	9,356	16,560

Included in the above are 163 specimens examined at the Infectious Diseases Hospital.

There was a big rise in malaria between the months of April and July. From the 13th April to the 13th July, the average number of microscopically diagnosed malaria cases (all races) was 212 per week. The highest weekly total was for the week ending on the 4th May, 1935—330 cases. The total number of positives (all races) increased from 3,119 in 1934 to 4,365.

As in the previous year, Asians show the greatest number of infections with *P. vivax*, which has increased this year by 65 per cent.

(*c*) *Serological Examinations.*

Thirty-six urines were examined for the presence of *S. haematobium* and two showed the presence of this ovum.

Thirty-seven cerebro-spinal fluids for cell count were received and examined.

Eighty-nine specimens of blood were examined to ascertain the group

Three liver smears were examined for the presence of *L. donovan* bodies; all were negative.

Three ascitic fluids were examined for the presence of microfilaria and found negative.

One specimen of pus from an empyema was examined for the presence of cysts and found negative.

C.—CALF LYMPH SECTION.

This has been a very difficult year in the production of calf lymph owing to the very poor state of the calves received for the purpose. It has been necessary to use half-grown male animals so that the manufacture has entailed a great deal of extra work. At the same time the potency of the lymph has been well maintained and a few cases of generalized vaccinia have been met with, fortunately not serious.

Demands have been large and a new arrangement has been entered into with Uganda whereby for a period of years they agree to purchase from us a certain minimum number of doses at a fixed rate, any excess over that number being at a reduced price. This enables us to plan ahead and may ultimately lower the cost.

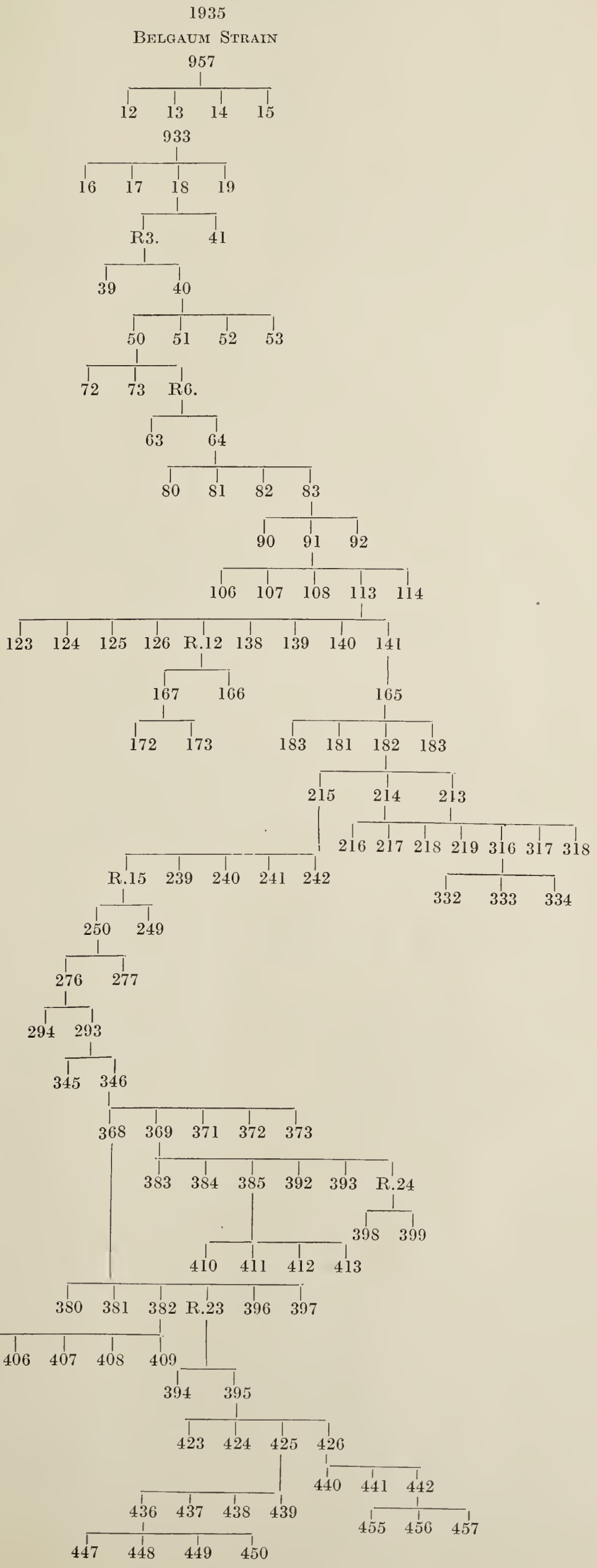
Production of Calf Lymph in 1935.

Total number of calves received	457
Total number of calves from which lymph was collected	274
Total number of calves rejected for being scabby, failed and died ...	173
Total number of calves which died before vaccinating	10
Balance on hand at the end of 1934	297,282
Total number of doses manufactured	907,960
Total number of doses issued	856,415
Total number of doses on hand on 31st December, 1935	348,827

List of Stations with amount of Calf Lymph supplied to each Station.

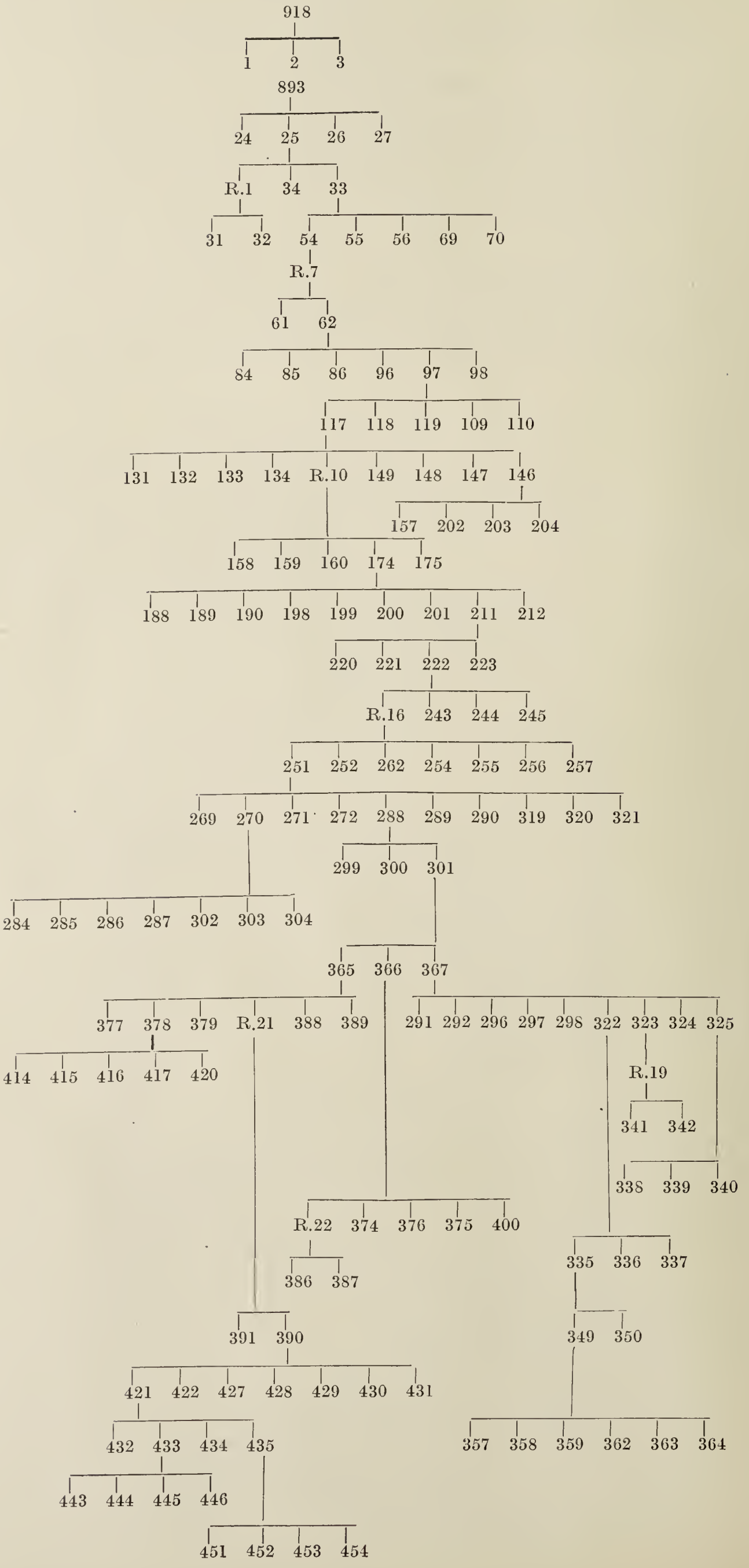
Stations	Doses
Mombasa	30,350
Lamu	1,040
Kilifi	500
Voi	5,200
Nairobi Prison	1,617
Miscellaneous	3,591
Fort Hall	520
Nyeri	650
Meru	2,060
Nakuru	2,865
Eldoret	1,587
Kapsabit	624
Kisii	72
Kakamega	10,200
Kisumu	4,600
Kericho	1,206
Kitale	616
Keruguya	1,500
Nanyuki	12
Gilgil	75
Wajir	72
Moyale	27,000
Wesu	103,813
Machakos	612
Kitui	140
Marsabit	600
Samburu	4,000
Marilal	15,000
Mariakani	900
Isiolo	1,200
Maua Meru	360
Kiambu	33
Total ..	222,615
Uganda	633,800
Grand Total ..	856,415

TABLES SHOWING THE HISTORY OF EACH STRAIN.

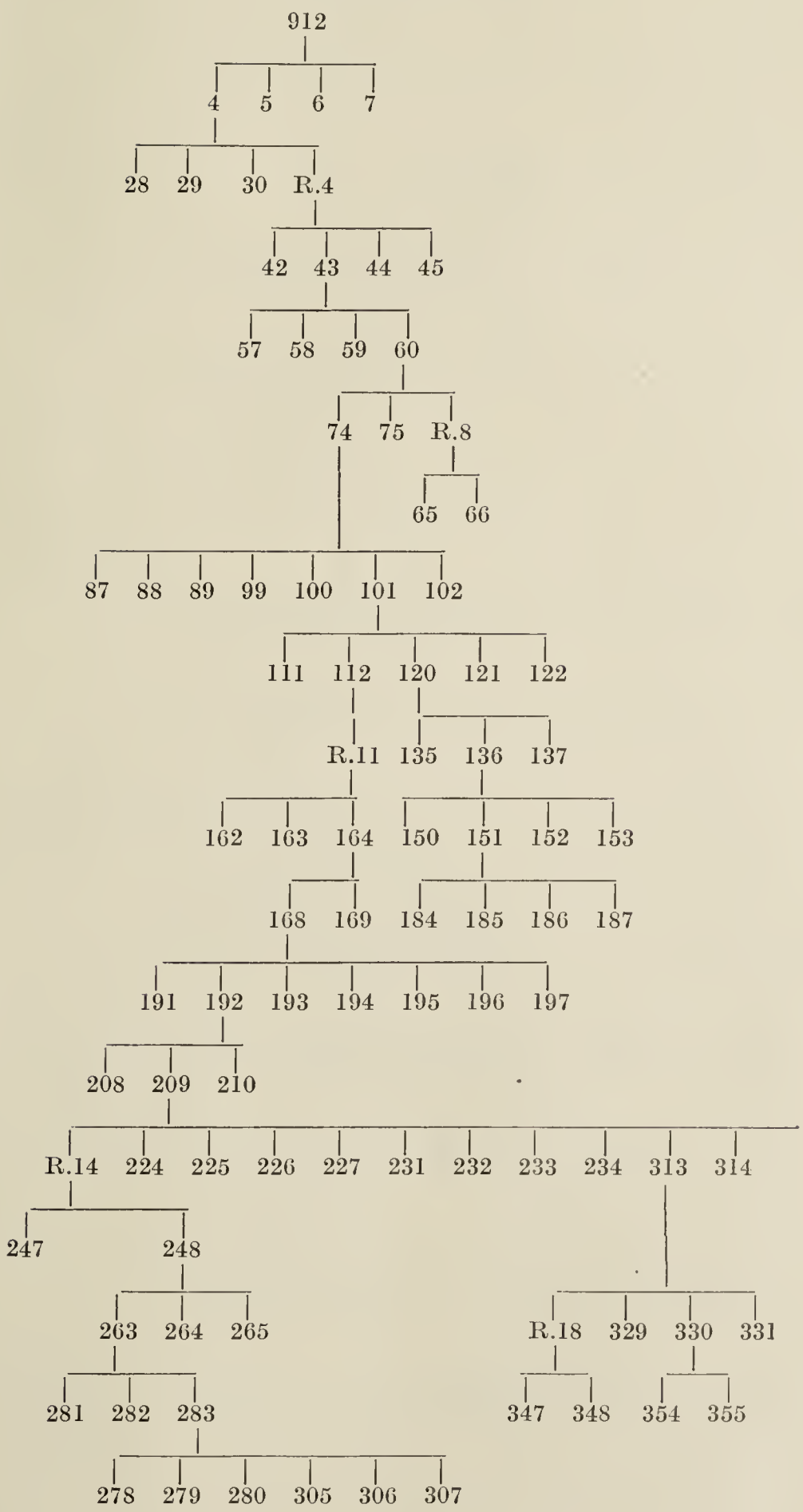


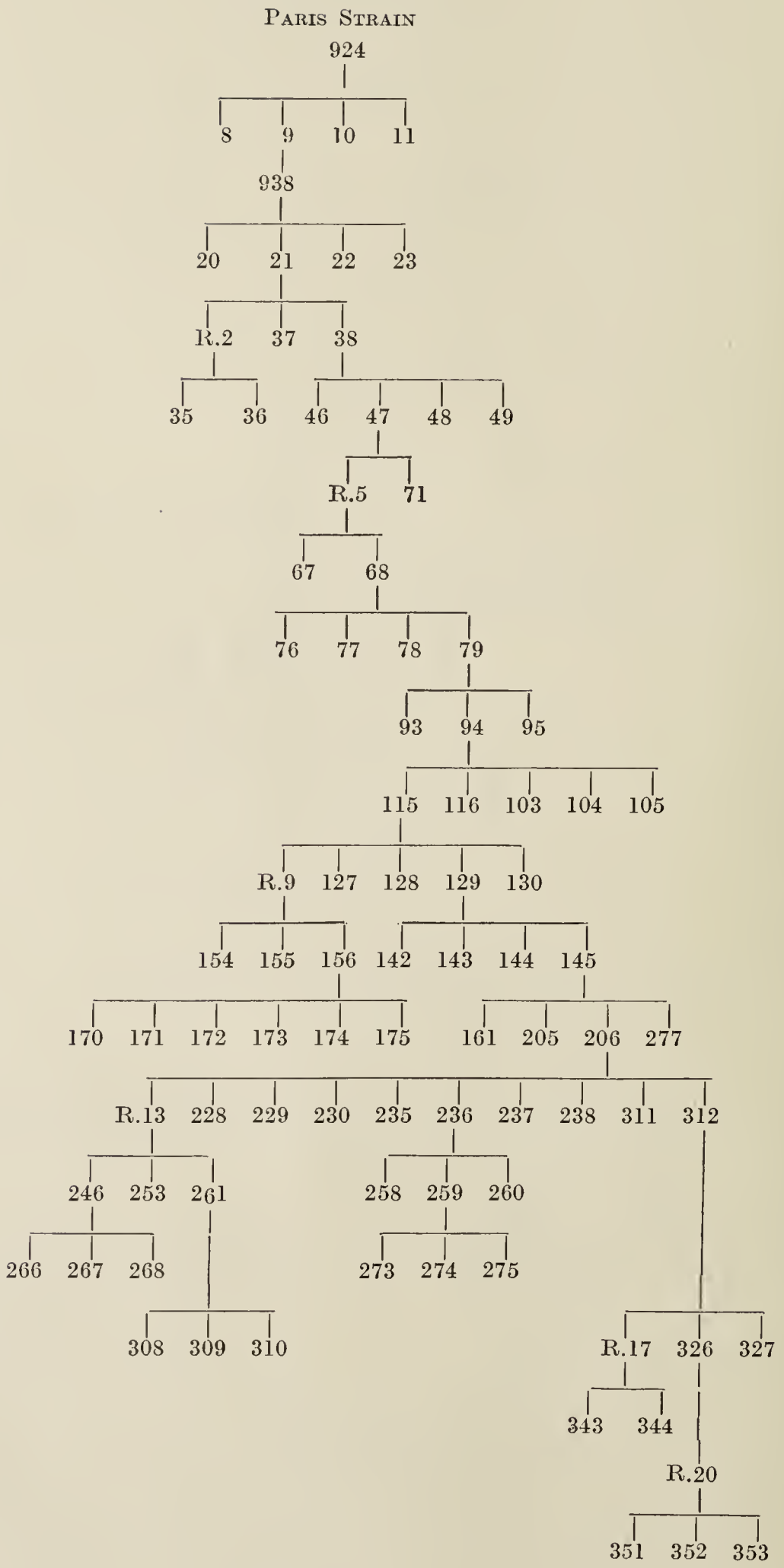
1934

BOEDANG STRAIN



South Africa Strain




Paris Strain
924
8 9 10 11
938
20 21 22 23
R.2 37 38
35 36 46 47 48 49
R.5 71
67 68
76 77 78 79
93 94 95
115 116 103 104 105
R.9 127 128 129 130
154 155 156 142 143 144 145
170 171 172 173 174 175 161 205 206 277
R.13 228 229 230 235 236 237 238 311 312
246 253 261 258 259 260
266 267 268 273 274 275
308 309 310
R.17 326 327
343 344
R.20
351 352 353

Residence	Total No. of Persons Vaccinated	Sex		Primary Vaccinations				Re-Vaccinations				Previous History Unknown			
		Male	Female	Total	Successful	Failed	Unknown	Total	Successful	Failed	Unknown	Total	Successful	Failed	Unknown
Mombasa	1	1	—	1	—	1	—	—	—	—	—	—	—	—	—
Lamu	438	409	29	—	—	—	—	438	—	—	438	—	—	—	—
Machakos	128	115	13	42	37	5	—	86	31	46	9	—	—	—	—
Fort Hall	122	118	4	37	34	—	3	85	58	2	25	—	—	—	—
Nyeri	510	503	7	165	—	—	165	345	—	—	345	—	—	—	—
Meru	761	749	12	101	36	19	46	660	84	202	374	—	—	—	—
Nairobi Prison	994	927	67	326	319	4	3	508	234	265	9	160	32	86	42
Nakuru	398	377	21	322	316	—	6	76	70	—	6	—	—	—	—
Eldoret	1,116	998	118	568	254	130	184	548	32	183	333	—	—	—	—
Kakamega	2,896	2,892	4	1,140	249	271	620	1,756	345	389	1,022	—	—	—	—
Kisii	14	8	6	10	7	2	1	4	2	2	—	—	—	—	—
Kericho	452	450	2	267	189	78	—	182	124	58	—	3	—	3	—
Kitale	204	175	29	176	161	6	9	28	2	18	8	—	—	—	—
Moyale	16,519	16,519	—	1,610	2	—	1,608	58	23	16	19	14,851	—	—	14,851
Kilifi	1,727	1,727	—	—	—	—	—	—	—	—	—	1,727	—	—	1,727
Narok	1	1	—	—	—	—	—	1	—	1	—	—	—	—	—
Kapsabit	1	1	—	—	—	—	—	1	1	—	—	—	—	—	—
Kiambu	16	7	9	13	10	—	3	3	—	1	2	—	—	—	—
Kitui	81	73	8	33	1	—	32	48	—	—	48	—	—	—	—
Rumuruti	5	1	4	4	1	—	3	1	1	—	—	—	—	—	—
Wesu	14,754	14,754	—	—	—	—	—	—	—	—	—	14,754	—	—	14,754
Wajir	60	60	—	2	2	—	—	58	23	16	19	—	—	—	—
Kisumu	5,208	5,208	—	111	49	18	44	217	44	59	114	4,880	—	—	4,880
Total ..	46,406	46,073	333	4,928	1,667	534	2,727	5,103	1,074	1,258	2,781	36,375	32	89	36,254

D.—SECTION OF PATHOLOGY.

1.—Staff.

Owing to shortage of staff in the Laboratory, the serological diagnosis of syphilis was taken over by the Pathological Section in the month of May.

The Kahn test only was being used at this time and this practice was continued.

2. KAHN RESULTS

Positivo	960
Negative	1,052
Doubtful Positives	26
Doubtful Negatives	1
Unfit for Examination	45
Total	2,084

3. CEREBRO-SPINAL FLUID

Positive	6
Negative	10
Unfit for Examination	1
Total	17

4. POST MORTEM EXAMINATIONS

African	174
Asians	3
Europeans	10
Total	187

CAUSE OF DEATH

Europeans—	
Pneumonic plague	1
Violence :	
Gunshot wounds	6
Strangulation	1
Dislocation of neck	1
Shock and multiple injuries	1
Asians—	
Pneumonia and pneumococcal meningitis	1
Violence :	
Multiple injuries	1
Fractured skull	1
Africans—	
Alcoholic poisoning	1
Anæsthesia	2
Amœbic abscess of liver	1
Carcimona of the lungs	1
Carcimona of the liver	1
Cirrhosis of the liver	1
Cerebral embolism	2
Dysentery	1
,, bacillary	1
,, amœbic	1
,, and pneumonia	1
Enteritis	1
,, gastro	2
,, gastro and toxæmia	1
Food poisoning	1
Fatty degeneration of liver	2
Ileus paralyticus	1
Intestinal obstruction	2
Intestinal obstruction and peritonitis	1
Malaria	5
,, cerebral	2
,, and myocardial degeneration	1
Meningitis, cerebro-spinal	2
,, pneumococcal	4
,, tubercular	5
,, meningococcal	6
Myocarditis	3
,, syphilitic and cardiac asthma	1
Nephritis, chronic	1
,, mixed	1
,, mixed parenchymatous and interstitial	2
,, interstitial and tubercular	1
,, parenchymatous	1

AFRICAN—	
Pneumonia	13
,, lobar	16
,, broncho	7
,, septicæmic	3
,, and meningitis	2
,, and tubercular abscess of the brain	1
,, and pericarditis	3
,, septicæmia and meningitis	1
,, lobar, parenchymatous, nephritis and pneumococcal meningitis	1
Poisoning	1
Peritonitis (following reflexed uterus)	1
,, (following ruptured appendix due to typhoid)	1
,, (following perforation of bowel)	1
Plague	1
Plague, bubonic	1
Relapsing fever	1
Septicæmia	6
,, and meningitis	1
,, osteomyelitis of humerus	1
,, pyonephritis and cystitis	1
Sarcoma of the ileum	1
Sarcoma, small, round-celled, arising in left ovary	1
Sarcoma of jaw and cerebral abscess	1
Syphilis, cerebral	1
Tuberculosis	1
,, generalized	6
,, of brain	1
,, pulmonary	1
,, and terminal pneumonia	1
,, and cachexia	1
Tuberculoma of brain	1
Typhoid	4
Toxæmia	2
Toxæmia following on volvulus and malaria	1
Tetanus (death consistent with)	1
Thoracic aneurism (ruptured)	1
Uræmia	1
Uræmia following cystitis	1
Violence :	
Asphyxia	1
Asphyxia due to œdema of glottis	1
Cerebral hæmorrhage following fractured skull	2
Dislocation of cervical vertebræ	1
Dislocation and fracture of cervical vertebræ	1
Fractured skull	8
Fracture and dislocation of neck	1
Hæmorrhage from fractured skull	1
Hæmorrhage from ruptured spleen	1
Meningitis following wound of brain	1
Ruptured spleen	1
Septicæmia and peritonitis following penetrating wound through abdomen	1
Shock and hæmorrhage	1
Strangulation	2
Shock following severe beating	1

5. HISTOLOGICAL EXAMINATIONS

EUROPEAN—	
Tumours, benign	17
Tumours, malignant	11
Inflammatory	30
Normal tissue	6
TOTAL	64

ASIATIC—	
Tumours, benign	1
Tumours, malignant	—
Inflammatory	2
TOTAL	3

AFRICAN—	
Tumours, benign :	
Adenoma	9
Cysts	15
Chondroma	3
Epulis	2
Fubroma	11
Hæmangioma	2
Lipoma	2
Lymphangioma	1
Meningocele	1
Papilloma	2
TOTAL	48
Tumours, malignant :	
Carcinoma	21
Endothelioma	9
Epithelioma	45
Glioma (malignant)	2
Melanoma	8
Mixed tumour of parotid	3
Myeloma	1
Sarcoma	35
Teratoma	2
TOTAL	126
Inflammatory (including 31 tubercular)	145
Degenerations	16
Hodgkin's disease	2
Intestines, amœbic	1
Liver, cirrhosis	5
Liver, passive congestion	2
Malarial tissues	14
Nephritis, parenchymatous	7
Schistosomiasis	5
Spleen, Bantes disease	1
Splenomedullary leukæmia	2
Syphilitic	6
Normal tissues	13
Other tissues removed post mortem for investigation	83
TOTAL	302
Animal tissues	11
GRAND TOTAL	554

E.—SECTION OF BACTERIOLOGY.

1.—STAFF.

Dr. de Smidt was in charge of the Section until the end of June when he was so unfortunate as to contract tropical typhus. From then till the 27th September it was under the control of Captain Cormack, when Dr. R. M. Dowdeswell took it over.

2.—ROUTINE WORK.

The total number of specimens received for examination during 1935 was 3,080 :—

For miscroscopical examination	1,841
For cultural investigation	1,239

Some of the pathogenic conditions diagnosed were :—

Anthrax.—Two cases.

Conjunctivitis.—In half the specimens examined the *Koch-Weeks* bacillus was found, others showed gonococci, pneumococci and the *Morax-Axenfeld* bacillus.

Diphtheria.—Ten positive throat swabs.

Dysentery.—Fifteen cases yielded strains of *Bact. flexneri;* two, *Schmitz's* bacillus; the bacillus of *Sonne*, *Bact. morgani* and a member of the genus *Salmonella* were each found once.

Gonorrhoca.—Sixty-seven were positive, mostly urethral discharges.

Leprosy.—Of the specimens received ten were positive.

Mcningitis.—Samples of cerebro-spinal fluid examined showed meningococci in sixty-one, pneumococci in fourteen, streptococci in two and *H. influcnzac* in one. The unusual number of meningococcal cases reflects the epidemic that occurred during the year.

Plague.—Ten rats found dead were sent in for examination, none showed *P. pestis.* One positive gland smear was diagnosed.

Plcural effusions.—Pneumococci were found in four specimens; streptococci, *M. tubcrculosis* and *H. influenzae* each occurred once.

Tuberculosis.—Of 969 sputum examinations, 206 showed *M. tuberculosis*, as did also three specimens of faeces, two of ascitic exudates and one testis examined after orchidectomy in a European patient.

Typhoids, etc.—*S. typhi* was recovered from fourteen blood cultures.

In four cases *B. fæcalis alkaligcncs* was cultured from the blood, an interesting finding, previously reported by Ledingham in Mosopotamia, Shearman and Moorhead in Egypt, Petruschky and others in fevers of the enteric type : it was also reported by Dr. de Smidt in 1930 in the blood of a patient suffering from an undulant type of fever : he noted its well-recognized affinity to the Brucella group but its failure to respond to Brucella sera. *S. typhi-murim*, *Bact. morgani No.* 1 and an undetermined type of the enteric group were also obtained from blood cultures.

Two fæcal cultures and one urine yielded *S. typhi.*

Other organisms encountered were Ducrey's bacillus from a soft sore and an *epidermophyton* from skin scrapings.

3.—Water Analyses.

Twenty-one samples of water received from the Nairobi Municipality, water supplies in the gold-mining areas and other sources, were examined bacteriologically.

4.—Vaccines.

(*a*) *Autogenous Vaccines.*—Two hundred and seventy-five autogenous vaccines were prepared during the year. One hundred and fifty of these were of the "agglutinating coliform" type and 125 for various rheumatic, catarrhal and other conditions. The results obtained from the former group are difficult to interpret, but in some cases appear to have been very satisfactory.

(*b*) *Treatment.*—Thirty patients were treated with autogenous vaccines at the Laboratory and T.A.B. inoculations have been carried out.

(*c*) *Stock Vaccines.*—The following were prepared and issued : Three hundred and ninety-five courses of a *detoxicated gonococcal vaccine*, which is reported by Medical Officers and Practitioners to be very satisfactory. Mr. Henfrey of the Infectious Diseases Hospital reports that of 300 cases of gonorrhoea treated about 200 received vaccine, which reduced the stay in hospital by about a week. *Polyvalcnt acne and staphylococcal vaccine*, two courses.

Polyvalcnt staphylococcal vaccine.—576 c.c. of a concentration of 1,000 million organisms to one c.c.

Mixed anti-catarrhal vaccinc.—A total quantity of 1,020 c.c.

Polyvalent streptococcal vaccinc.—432 c.c. containing 100 million organisms per c.c.

Polyvalent strcptococcal and staphylococcal vaccine.—828 c.c. of 1,000 million organisms per c.c.

Stock Prophylactic Vaccines.

(*d*) *Typhoid-paratyphoid Vaccines.*—Prepared, 43,865 c.c. Issued, 19,145 c.c. The method of preparation used in 1934 was continued and the virulence of the strains of *S. typhi*, *S. paratyphi—A*, and *S. paratyphi—B*, maintained by mouse passage.

It will be noticed that the quantity issued was nearly double that of 1934. 4,250 c.c. were issued to Uganda. 1,515 c.c. of the diluted vaccine (for children) were prepared and 730 c.c. issued.

(*e*) *Plague Vaccine.*—Prepared, 620,000 c.c. Issued, 332,000 c.c. This shows an increased demand of 220,423 c.c. over that of 1934 : 59,260 c.c. were sent to Uganda.

(*f*) *Anti-rabic Vaccine.*—Prepared, 143 courses. Issued, 117 courses, These figures are almost identical with those of the previous year. Sixteen courses were sent to Tanganyika and thirty-five courses to Uganda. A carbolized suspension of rabbit's brain and cord was used, the Paris virus being maintained by passage in rabbits.

(*g*) *Pneumococcal Vaccine.*—Prepared, 112,400 c.c. Issued, 60,000 c.c. This vaccine, the introduction of which has been due to the valuable work of Dr. de Smidt, was first made available in 1934 when 7,060 c.c. were issued for trial, mainly to Dr. Searle, Medical Officer to Risks, Ltd., of Kakamega. Six types of pneumococci were included in the 1934 vaccine but in 1935 two more types were added so that the vaccine now contains types I, II, III, Kw.D, Kw.J, Kw.L, Kw.M and Kw.O in equal quantities. An improvement in the preparation of the concentrated vaccine has been effected by Mr. Doust, who has been responsible for the final stages of preparation, with the introduction of a sedimentation technique.

Results of experiments on the use of this vaccine are mentioned under the heading of "Research".

5.—Anti-Sera.

The following anti-sera were obtained from England, India or South Africa :—

	Ampoules Received	Ampoules Issued
Anti-streptococcal (multivalent)	294	189
Anti-streptococcal (puerperal)	148	87
Anti-meningococcus serum	1,972	968
Meningococcus anti-tixin	300	47
Tetanus anti-toxin (prophylactic)	204	174
Tetanus anti-toxin (therapeutic)	183	172
Anti-gas gangrene	58	51
Sclavo's anti-anthrax serum	168	102
Diphtheria anti-toxin (prophylactic) .. .. Balance	41	41
Diphtheria anti-toxin (therapeutic)	60	39
Anti-venomous	20	16
Anti-dysentery	120	84

6.—Finance.

A consideration of the financial aspect of vaccines, disregarding purchase of equipment, media, etc., as well as the revenue from water analyses, routine examinations and cultures (which amounted to more than £124) is of interest :

Revenue from vaccines (stock and autogenous) ... £405 17 00

The following approximate values of the stock vaccines prepared in the Laboratory are based on prices quoted by the South African Institute for Medical Research, which are slightly lower than those of Parke, Davis & Co.

	Value	
	Prepared	Issued
	£	£
Plague Vaccine, Prepared (620,000 cc.)	31,000	
Plague Vaccine, Issued (332,000 cc.)	..	16,600
T.A.B. Vaccine, Prepared (43,865 cc.)	2,192	
T.A.B. Vaccine, Issued (19,145 cc.)	..	957
Anti-rabic Vaccine, Prepared (143 courses)	336	
Anti-rabic Vaccine, Issued (117 courses)	..	275
Pneumococcal Vaccine, Prepared (112,400 cc.)	5,620	
Pneumococcal Vaccine, Issued (60,000 cc.)	..	3,000

7.—Research.

Owing to Dr. de Smidt's illness research work has been necessarily limited during 1935, but the majority of the work done was concerned with the typing of pneumococci with special reference to the production of vaccine.

A.—Pneumococcal typing was carried out with the helpful co-operation of Dr. Carman, Dr. Watkins-Pitchford and Dr. Hale at the Native Hospital, Nairobi, and of Dr. Vint.

During the year the total number of specimens investigated was 140; of these ninety-six were classified. The series may be grouped as follows :—

(1) Results obtained from sputa of patients suffering from lobar pneumonia—

(*a*) those in which some type of pneumococcus was recovered;

(*b*) those in which other bacteria only were found.

(2) Results from specimens taken post-mortem, in most instances from lungs in various stages of consolidation and in many cases from subjects whose sputum had previously been examined.

(3) Results obtained from such specimens as cerebro-spinal fluids, pleural effusions, etc.

The technique employed has been described by Dr. de Smidt in his Report for 1933 : this was maintained with only minor modifications.

The group bearing most directly on the problem of pneumonia is that classified as (1) (*b*), which includes the great majority of examinations. The results obtained under this heading were as follows :—

Type	Actual Number	Incidence	Type	Actual Number	Incidence
		Per cent			*Per cent*
I	18	25·4	Kw. O	0	0
II	3	4·2	Kw. P	2	2·8
III	8	11·3	Kw. Q	0	0
Kw. B	0	0	Kw. R	0	0
Kw. C	0	0	Kw. S	0	0
Kw. D	5	7·0	Kw. T	0	0
Kw. F	4	5·6	Kw. U	1	1·4
Kw. G	0	0	Kw. V	3	4·2
Kw. I	3	4·2	Kw. W . ..	2	2·8
Kw. J	5	7·0	Kw. X	2	2·8
Kw. K	0	0	Unclassified		
Kw. L	4	5·6	Group IV ..	10	14·1
Kw. M	1	1·4			
Kw. N	0	0	Total ..	71	

Three specimens yielded *streptococci* in pure culture; *H. influenzae* associated with *streptococci* in one and with *pneumococci* in another case and a mixture of *Friedlanders bacillus* and *pneumococci* once. The figures show results somewhat similar to those of last year.

Results from group (2) show Type I, five; two specimens each of types Kw.D, Kw.L, Kw.M, Kw.R and Kw.V; and one each of types III, Kw.G, Kw.J and Kw.O.

Group (3) gave Type I, two cases: Types Kw.D, Kw.L and Kw.T one each, with one unclassified Group IV.

The eight types included in the vaccine thus accounted for over 20 per cent of the pneumonia and pneumococcal meningitis infections of the year.

The identification of our three prominent types Kw.D, Kw.J and Kw.L with prominent types classified by Miss Cooper of New York and of Sir Spencer Lister's series was mentioned in the 1934 Report; while it is hoped that further correlation will be possible when Miss Cooper's type suspensions arrive.

Experiments on the value of the prophylactic use of the vaccine were continued by the Medical Officer to Risks Ltd., Kakamega, and K.D. Ltd., Dr. Searle, to whom we are very grateful for reports on the pneumonia incidence, etc., among the labour employed by these companies, where 2 doses of $1\frac{1}{2}$ c.c. of the vaccine were given with a week's interval to each native, every six months. The figures given are quoted by the kind permission of Dr. Searle :—

	Average Number of Labour Employed	Cases of Pneumonia	Deaths
Oct., 1933, to Sept., 1934 (No Vaccine Given)	1,800	83	20
Oct., 1934, to Nov., 1935	900	19	2 (one unvaccinated)

It is of course difficult to draw reliable conclusions from such an experiment owing to such undetermined factors as improvement in conditions, considerations of immunity, seasonal incidence, etc. But it is at least strongly suggested that the vaccine is of real value in prophylaxis.

A further trial was made at the Prison, Nairobi, with the co-operation of the Medical Officers in Charge, the results of which are :—

	Total Number of Prisoners	Cases of Pneumonia	Deaths	Mortality Rate
				Per cent
1933	1,225	47	6	12·8
1934	1,747	119	19	16·0
1935 (Every Admission Given Vaccine)	1,124	32	9	28·1

The figures obtained here, however, are clearly inconclusive.

The therapeutic use was tried on cases of lobar pneumonia at the Native Hospital, Nairobi, where two series of cases were treated, one with vaccine, the other with calcium injections. The following figures are quoted from Dr. Carman's annual report :—

	Cases	Deaths	Mortality Rate
			Per cent
Period 1929 to 1934	3,226	621	19·3
1935 (Total of all Lobar Pneumonias) ..	487	111	22·7
1935 (Dr. Hale's Series)	173	30	17·3
1935 (Dr. Watkins-Pitchford's Series having Vaccine)	62	15	25·8

This experiment appears to indicate that vaccine therapy is not only unsatisfactory but in fact dangerous, although it is likely that it was not possible in most cases to start treatment in the early stages of the disease, when vaccine therapy is more likely to be efficacious. This result raises the question of the possibility of the production of a "negative phase" the danger of which was pointed out by Wright as long ago as 1909, for Robertson and Cornwall have shown that sera of healthy persons and of patients may show anti-bodies against types of pneumococci.

As assessment of *the significance of this experiment* however, assuming that the two groups consisted of similar individuals under similar conditions, gives the observed difference in death rate as 8.5 per cent, the standard deviation of this difference in percentage mortality is 5.8, which gives the deviation in terms of the standard deviation as 1.46. The odds against this observed difference being the result of random chance is therefore about 6 to 1, so that we can deduce that the experiment is hardly statistically significant, and the difference between the mortality rate in Dr. Watkins-Pitchford's series and that of the total for the year or the previous six years is clearly still less significant.

B.—*Plague.*—Research on this subject was limited to minor improvements in the technique of vaccine preparation and to tests of vaccine on rats.

The following is a test of vaccine prepared at 37° C. :

Test : 12 control rats : no vaccine.—1 survived.

12 rats given vaccine.—4 survived.

Using the method of "standard deviation" to assess the significance of this result, we obtain the standard deviation of the observed difference in survival rate as 0.166. Therefore the odds against the observed difference being due to random chance are 6.5 to 1, indicating an inconclusive result. Further tests will be done.

C.—*Meningitis.*—At the end of the year work on the meningococci occurring in cases of cerebro-spinal meningitis was started and the preparation of a suitable medium of the kind used and recommended by Murray and Ayrton. There has been an exacerbation of this disease in the Colony during the year and it is thought that the preparation of a prophylactic vaccine from local types might be tried.

F.—SECTION OF ENTOMOLOGY.

1.—Staff.

Mr. J. O. Harper proceeded on leave on the 6th July, 1935. His duties in Kisumu were taken over by Mr. W. E. Grainger.

2.—Mosquitoes and Malaria.

(*a*) *Nairobi.*—The routine survey has been continued. A serious seasonal rise in malaria occurred during the period April to July as the result of the uncontrolled breeding of *Anopheles gambiae*. Warnings that an abnormal output of this species might be expected were issued by us in January and February. An attempt at control was commenced too late. There is still no apparent control of pits and quarries.

(*b*) *Kisumu.*—Routine control has continued satisfactorily under Mr. Harper, and later Mr. Grainger.

There was a small seasonal occurrence of malaria in the township which resulted almost entirely from an invasion of the controlled area by *A. gambiae* (and to a lesser extent by *A. funestus*) from the very extensive breeding grounds outside. With the gradual permanent abolition of breeding grounds in the township and air-port area, facilitated by a grant from the Colonial Development Fund, the controlled area will be extended to prevent such invasions. Preliminaries are being arranged for rendering permanent the temporary measures that have proved successful during the first few years.

Particular attention is being paid to the air-port area and the lake shore in the vicinity.

(*c*) *Kakamega.*—Mr. Teesdale, Field Assistant, has continued routine surveys and control in the township and on the mines during the year. Trials are being carried out, in certain areas, of paris green as a substitute for oil.

(*d*) *Kitui.*—Routine control has been continued by one trained African and labour supplied by the local authority.

(*e*) *Fort Hall.*—The trained African staff has been reduced to one. A definite scheme of control has been drawn up for the township.

(*f*) *Digo.*—Routine observation and control have continued.

(*g*) *Meru.*—Routine observation and control have continued. *A. demeilloni* has now been found in huts in one district. This species breeds intensively in several areas. A special survey is being made along the Thingithu River locations in which spleen rates range from 0 to 92 per cent.

(*h*) *Kilifi District.*—Observations have continued. Special attention is being paid to Malindi where *A. funestus* is breeding extensively inside houses. The staff has been increased to three Africans and a control of the domestic breeding is being attempted.

(*i*) Routine identifications for Kisumu and Kakamega are made by the European Officer in charge. All others are dealt with in the Central Laboratory, Nairobi.

(*j*) Over 5,700 dissections for infectivity have been done during the year on adults captured in houses and huts in various districts. Infection is still confined to *A. gambiae* and *A. funestus*.

3.—Culicines and Aedes.

Data are accumulating on the distribution of Aedes and Culicine species. These are now included in routine surveys in most areas.

4.—Carriage of Insects in Aeroplanes.

A first report has been submitted on results of about two years' searches in aircraft arriving in Kisumu and Nairobi. Searches are being continued. Two specimens of Aedes (*A. nigericnsis* and *A. argenteopunctatus*) have been captured. The disembarkation traps have been tested but so far they have yielded nothing striking.

De-insectization by means of pyrethrum extract fluids has not yet become completely effective in this part of Africa. Probably aeroplanes will cease to carry mosquitoes and other pests, including rats, only when all aerodromes have been thoroughly sanitated with this end in view. The measures of general sanitation, as now adopted in townships, are not enough : eradication of mosquitoes and rats demands a very special effort.

5.—Tsetse Fly and Sleeping Sickness.

(*a*) *Kaniadoto.*—The work in this district, facilitated by a grant from the Colonial Development Fund, has shown that the "block" method of *palpalis* elimination is a practical one. The experimental work has released some six square miles from "fly" and settlement is now going on. Funds have been granted by the Local Native Council for a continuation of the work done down the Kuja River and its tributaries.

A special report on this field test is being prepared.

(*b*) *Port Victoria–Sio.*—A repetition of the trials at Kaniadoto is being carried out along some eight miles of lake shore in this area. Five clearings have been made and fly elimination between them is now going on. Some of the clearings have been made large enough to permit of an immediate production of crops. The local population, led by the Chief, appear to be very keen to reoccupy the area.

(*c*) Little more has ben done on the investigation of tsetse foods. It is intended to submit our results to tsetse field workers for criticism before undertaking further tests (except with regard to *G. palpalis*). The greatest difficulty is experienced in obtaining supplies of blood for the preparation of anti-sera and it is therefore doubtful if our results are sufficiently specific to warrant future work.

6. Observations have been carried out on the breeding of flies in night soil trenches. The species concerned are of the *domestic* group. One undescribed species—*Musca cuthbertsoni, Patton*—occurs in very large numbers. Tests are being carried out with a view to control.

7.—Visitors.

In May we were visited by Sir Malcolm Watson, Director of the Ross Institute, London. He was conducted round some of our areas to study malaria conditions and our methods of control.

In December Dr. F. L. Soper of the Rockefeller Yellow Fever organization in Brazil paid a brief visit on his way to Europe. He was able to enlighten us as to the potential yellow fever conditions in Kavirondo and Nairobi.

Much good will come of such visits.

8.—Plague.

Intensive investigation of the South Kenya endemic area has been continued. There is no evidence whatsoever that plague exists in the field rodent population of this area, nor is there any evidence that plague is transported either by the agency of man, rats, fleas or merchandise to other areas.

An important advance in the knowledge of the epidemiology of the disease has been made. In townships in Kenya, there is always a mixed flea population present on domestic rats, whereas in the native reserves only *X. brasiliensis* is present and human mortality figures are much lower during outbreaks than what is encountered in township plague. It has now been established that *Rattus* living underground is only infested with *X. cheopis*, whereas those living in roofs, such as the thatched roofs of native huts or even under corrugated iron structures, are infected with *X. brasiliensis*. One factor to account for higher mortality rates in townships is that Africans and Indians there have their bedding mainly on floors and it is certain that contact with *X. cheopis* from rats emerging from the ground is much greater than with rats infested with *X. brasiliensis* living in a thatched roof which often only emerge on the outside of the hut for the purpose of raiding cereal stores.

Experiments with hydrocyanic acid gas products have been continued. There is a marked reduction in the number of rats following fumigation, but unless an unlimited quality of HCN products and labour are available, routine fumigation is not warranted. It has therefore been our aim to secure the most efficient method in reducing human mortality figures with limited stocks. To this end, it is recommended that at vulnerable points in endemic areas, stocks of fumigant should be kept, and that instructions be issued to headmen that at the first report of rat mortality, they should collect volunteers to transport pumps and fumigant so that gassing of the affected area may be carried out. Usually, the same locations repeatedly suffer from the disease and as these are known, it could be so planned that stocks could be made available for them.

Rat destruction on a large scale, throughout the endemic areas, is far too expensive in the present stage of their development and the most that can be hoped for will be to lessen human mortality.

Fumigation, confined to actual outbreaks, would help considerably in preventing contact between infected rats and the inhabitants of the affected areas and is an economical proposition.

9.—Schistosomiasis.

A start has been made on a snail survey of the Colony. Nairobi schistosomiasis is mainly caused by *S. mansoni*, but the snail survey has shown that large numbers of *Physopsis* sp. are also present, in addition to *Planorbis* sp. Towards the end of the year, a survey was commenced in the Digo District on the coast, where *S. haematobium* infections are common.

10.—Typhus.

There is little doubt remaining that the disease known in the past as "Tropical Typhus of Kenya" is none other than "fiévre boutonneuse" of the Mediterranean littoral, and that it is conveyed by *Rhipicephalus sanguineus*, and that whenever a case occurs we have all the usual features which distinguish it from the more obscure forms. There is always a history of dogs in the house, there is often a "tick-bite" and clinically it resembles the descriptions of fiévre boutonneuse and there is usually a strong titre for X19 and X2 Proteus groups.

There are still quite a number of houses reported as heavily infected witb *R. sanguineus*, which present great difficulty in cleaning up, nothing short of complete stripping of woodwork and blow-lamping walls and woodwork appears effective. The short rains of 1935 have been satisfactory and again it is noted a higher incidence in typhus occurred following heavier rainfall.

11.—Fumigation.

During the year a new system of fumigating railway coaching stock was inaugurated, employing paper discs impregnated with HCN gas. The method proved to be much cheaper and more rapid than the old method, but owing to poor packing it was found that about 75 per cent of the tins were leaking, and the products of decomposition had a bad effect on the health of fumigators.

Recommendations had to be made that the old method should be reverted to pending improvements in methods of packing paper discs.

12.—Acknowledgments.

We desire to thank Sir Guy Marshall and members of the Imperial Institute of Entomology, Professor Patton and Dr. Evans of Liverpool, Dr. Edwards of the British Museum, Dr. Buxton of the London School of Tropical Medicine, and many others, for much help during the year.

G.—BIOCHEMISTRY SECTION.

1.—Organization.

The staff of the Section consisted of the Biochemist and two native laboratory attendants. For the period 1st January to the 7th February and the 24th October to the 31st December, Mr. H. M. Nefdt was attached to the Section and was responsible for the bulk of the routine work.

2.—Routine Work.

The following table gives the number and nature of the routine examinations made during the year :—

(*a*) *Urines.*

General examination, i.e., reaction, specific gravity, albumin, sugar and deposit ...	1,132
Maclean's urea concentration test	24
Albumin	10
Sugar	72
Albumin and sugar	2
Deposit	6
Urea clearance test	1
Acriflavine	2
Lead	1

(*b*) *Blood.*

Sugar tolerance curves	35
Sugar	31
Urea	40
Proteins	2
Calcium	7
Cholesterol	1
Von den Bergh test	3

(*c*) *Fæces.*

Occult blood	23
Bile	1
Bile acids	1
Fat estimation, i.e., total fat, fatty acids and soaps	12

(*d*) *Gastric contents.*

Fractional test meals, i.e., total and free acidity and quantitative tests for bile, blood and lactic acid	43
Bile only	1

(*e*) *Cerebro-spinal fluid.*

Globulin excess	12
Globulin and sugar	1
Protein estimation	2
Lange gold curves	8
Globulin and Lange gold curves	2

(*f*) *Miscellaneous.*

Renal and urinary calculi	2
Human milks	2
Vomit	2
Fluid	1

The preparation of metallic bismuth was continued and during the year 125,400 doses were sent to Medical Stores for issue to Medical Officers. In addition 500 doses of a suspension of bismuth oxide were prepared and issued for experimental purposes.

3.—Reseach Work.

The work on the composition of the blood of the East African native stated at the end of 1934 under the scheme suggested by the Inter-territorial Research Conference of 1933 has been continued. A series of seventy-four normal individuals has been examined. Estimations of haemoglobin by measurement of the oxygen-combining capacity and the iron content of the blood have shown the increases expected at this altitude but this has not in general been accompanied by an increase in the cell count.

With the co-operation of Dr. Hale of the Native Civil Hospital, Nairobi, some pathological cases were also examined and acknowledgment is made of his assistance.

It was intended to begin work on the estimation of the basal metabolic rate of Kenya natives but delays due to the arrival of the Haldane apparatus in a damaged condition on two occasions have prevented this being undertaken.

The possibility of the application to the Kenya native of the Du Bois and Du Bois formula for the calculation of body surface area from body

weight and height has been considered. A comparison was made on eighteen individuals of the results from the weight-height formula and those from the more detailed linear formula of the Sage investigators. The closest agreement was obtained between the two sets of figures when the second of the alternative formulae for the surface area of the thighs was used, viz., that in which the measurement from the upper border of the pubes to the lower border of the patella is utilized.

Some attention has also been given to the vital capacity of the East African native and the possibility of the application of the formulae devised by Dreyer for European subjects. Two groups, one of "untrained" individuals from the Laboratory native staff and Nairobi Prison, and the other of "trained" individuals from the 5th Battalion of the King's African Rifles have been examined. In each group there were eighty-six subjects and compared with Dreyer's Class C standards from body weight each group showed an average deviation of about 16 per cent. Comparison with trunk and chest standards was complicated by the result which was obtained by the application of Dreyer's formula relating these two measurements since an average increase of about 7 per cent in the chest circumference of both groups was obtained. These, as well as the blood examinations, are to be continued at sea-level and acknowledgment is made of the help given in this connection by the Commissioner of Prisons and the Officer Commanding the 5th Battalion King's African Rifles.

APPENDIX I.

RESUME OF WORK CARRIED OUT BY THE CLINICAL LABORATORY ATTACHED TO THE NATIVE HOSPITAL, MOMBASA, DURING THE YEAR 1935.

1.—Staff.

European.—Mr. T. G. R. Jones was in charge until the 9th of March, 1935, when he proceeded to England on long leave, being relieved by Mr. W. L. Titman.

African.—Two trained African Assistants.

2.—Examinations.

During the year 13,060 specimens were received and dealt with.

The sum of Sh. 1,840 was collected on account of examinations carried out for Medical Practitioners engaged in private practice.

A detailed account of the work carried out is as follows :—

3.—Blood Examinations.

Microscopical examinations (parasites, counts, etc.) : 4,369 blood slides were examined. There has been a very noticable increase in the numbers of slides showing *S. rossi*. The following list shows blood examinations performed :—

Negative	3,233
Differential counts	92
Complete blood counts	19
P. falciparum (crescents 22)	931
P. malariae	35
P. vivax	14
S. rossi	13
Microfilariae—Sheathed	6
Microfilariae—Unsheathed	16
Mixed infections (included in the above)	17

4.—Fæces.

3,659 specimens of fæces were examined, a considerable reduction from the number examined last year. Trichuris and Ancylostoma were the predominating ova. *E. histolytica* seems to maintain its high level. The following were the findings in the specimens examined :—

Negative	1,119
Taenia saginata	352
Ascaris lumbricoides	772
Ancylostoma duodenale	1,336
Trichuris trichiura	1,553
Strongyloides stercoralis	98
Schistosomum mansoni	72
Oxyuris vermicularis	27
Hymenolepis nana	2
Schistosomum haematobium	2
Entamoeba coli	835
Gairdia intestinalis	475
Entamoebae histolytica	348
Iodamoeba butschlii	41
Flagellates (undifferentiated)	693
Entamoeba nana	15

5.—Serological Examinations.

(*a*) Widal's test was carried out on 109 samples of serum, taking as a standard, agglutination in a dilution of 1 in 50 or higher, using Dreyer's technique, with the following results :—

Negative	80
B. typhosus alone	21
B. para A alone	2
B. para B alone	2
Group agglutinations	4

In addition to the above, three specimens were sent to Nairobi for examination for agglutinations against *B. abortus*.

(*b*) 153 specimens of blood were received, the sera pipetted off, and forwarded to Nairobi for the Wassermann, Khan or Sigma tests.

(*c*) 10 blood group tests were made.

6.—Bacteriological Examinations.

76 specimens for cultural examination were received and dealt with. Those requiring further cultural examination or vaccine preparation were forwarded to Nairobi.

Blood cultures	3
Fæces cultures	10
Urine cultures	46
Throat swabs (K.L.B.) (one positive) ...	17

7.—Microscopical Examinations.

(*a*) *Gonorrhoea*.—230 specimens of urethral exudate were examined and *Diplococcus gonorrhoca* was identified microscopically in 137.

15 smears from eyes were examined for gonococci, 5 of which proved positive.

(*b*) *Lymph from chancres*.—41 specimens were examined, *T. pallida* being identified in 6.

(*c*) *Leprosy*.—9 nasal smears were received and examined. *B. leprae* were found on 2 occasions.

(*d*) *Sputum*.—386 specimens were examined for the presence of tubercle baccilli and 97 proved positive.

Two were stained by Gram's method for identification of other organisms, and one further specimen for the presence of *E. histolytica*, the latter proving negative.

(*e*) *Plague*.—1,624 smears from rats, either trapped or found dead, were examined for *B. pestis*, all of which proved negative.

(*f*) *Cerebro-spinal fluid*.—22 specimens of C.S.F. were received and dealt with as follows :—

Negative	7
Meningococci present	7
T.B.—negative	1
Cell counts	7

(*g*) *Anthrax*.—One smear for anthrax was examined and was found to contain *B. anthracis*.

(*h*) *Miscellaneous smears*.—49 smears from various sources for miscellaneous examination, test, etc., were received and dealt with.

8.—Urines.

2,486 specimens of urine were received and examined as follows :—

General examination	2,460
Gonococci—negative	14
Gonococci—positive	2
Sugar estimation	2
Albumin estimation	4
Acetone estimation	2
T.B.—negative	1

(*S. haematobium* was found in 136 specimens during the course of the above examination.)

9.—Water Anaylsis.

Five bacteriological examinations of water were performed, four of the Mombasa Water Supply and one from a well.

The preliminary results of these, together with subcultures, were forwarded to Nairobi for completion of the tests.

10.—Pathological Specimens.

24 specimens were forwarded to Nairobi for histological examination.

11.—Miscellaneous Specimens to Nairobi.

(*a*) Cultures for vaccine preparation	5
(*b*) Blood filtrates for sugar estimation	4
(*c*) Blood filtrates for tolerance curve	1
(*d*) Distillates from *tembo* for alcohol percentage	6
(*e*) Cerebro-spinal fluid for Wassermann reaction	1
(*f*) Stone, query nature	1

12.—Post-mortems.

16 post-mortems were performed with the following results :—

Abscess : lung	1
Abscess : brain	1
Ruptured kidney	1
Stab wounds	1
Growth, liver	1
Pneumonia	1
T.B.	1
Intestinal obstruction	1
Fractured skull	3
Post-operative	1
Liver abscess	1
Aneurism, aorta	1
(?) Poisoning	1

APPENDIX II.

RESUME OF WORK CARRIED OUT AT THE CLINICAL LABORATORY ATTACHED TO THE NATIVE HOSPITAL, KISUMU, DURING THE YEAR 1935.

1.—Staff.

Mr. A. H. Daws was in charge of this Laboratory from the 1st March, when it was placed on its present basis, until the end of the year. He has three African Laboratory Assistants working under him.

Total number of specimens examined	20,698
Fees collected	Sh. 700

2.—Blood Examinations.

(i) For parasites :

Total	12,111

(including 1,800 of malaria survey, details of which will be found in the Annual Health Report, Kisumu, 1935.)

P. falciparum	2,873
P. falciparum gametocyte	156
P. vivax	24
P. malariae	240
Mixed	52
Unsheathed	33
S. rossi	26
(ii) Total counts	40
(iii) Differential counts	247
(iv) Blood grouping	30
(v) Fragility	1
(vi) Van den bergh	6
(vii) Ehrlich's diazo	1
(viii) Widal test :—	
B. typhosus	11
B. paratyphosus A.	0
B. paratyphosus B.	10
Br. abortus	1
Negative	60

3.—Fæces Examinations.

Number.	4,372
Ova of taenia	577
Ova of ascaris	553
Ova of ankylostoma	340
Ova of trichuris	328
Ova of *schisotsoma mansoni*	128
Ova of strongyloides	105
Ova of oxyuris	13
H. nana	5
Entamoeba coli	366
E. histolytica cysts	40
E. histolytica, free forms	234
Iodamoeba butschlii	9
Giardia intestinalis	9
Chilomastix mesnili	149
Flagellates	258
Isospora hominis	3

APPENDIX III.

The following stations were provided with African Laboratory Assistants, trained at the Nairobi Laboratory :—

Kericho.
Fort Hall.
Msambweni.
Kiambu.
Machakos.
Meru.
Kakamega.
Kisii.
Kitui.
Kilifi.
Wesu (Teita).
Keruguya.
Eldoret.
Maseno.

The total numbers of the various specimens examined at the outstations were :—

Blood examinations	...	...	...	31,981
Fæces examinations	...	...	...	23,341
Miscellaneous examinations		...	...	13,118
			Total ...	68,440